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ABSTRACT

This book, one of a series that uses Geographic Information Systems (GIS) to outline the need for and provision of services (education, health, housing, electricity, roads, telecommunications, postal services, and police services) in each of the nine South African provinces, presents a global view or indicator of the simultaneous influence of the socio-economic status of people and the level of provision of domestic services and public facilities in the Northern Cape district. The view in this book encapsulates its social and service profile, obtained, first, by developing indices for the social and service variables of the district. The book uses a single index, or benchmark, of levels of socio-economic status, household services, and public facilities in each magisterial district, created by combining these indices. In order to provide information about local levels of development, knowledgeable persons involved in service delivery in each province were contacted for their comments. The books in this series contain maps, tables, a bibliography, and contributions from spokespersons in non-governmental organizations, universities, government departments, service providers, parastatals, and research organizations. Demographic information is based on the 1991 census data. (Contains 33 references.) (BT)

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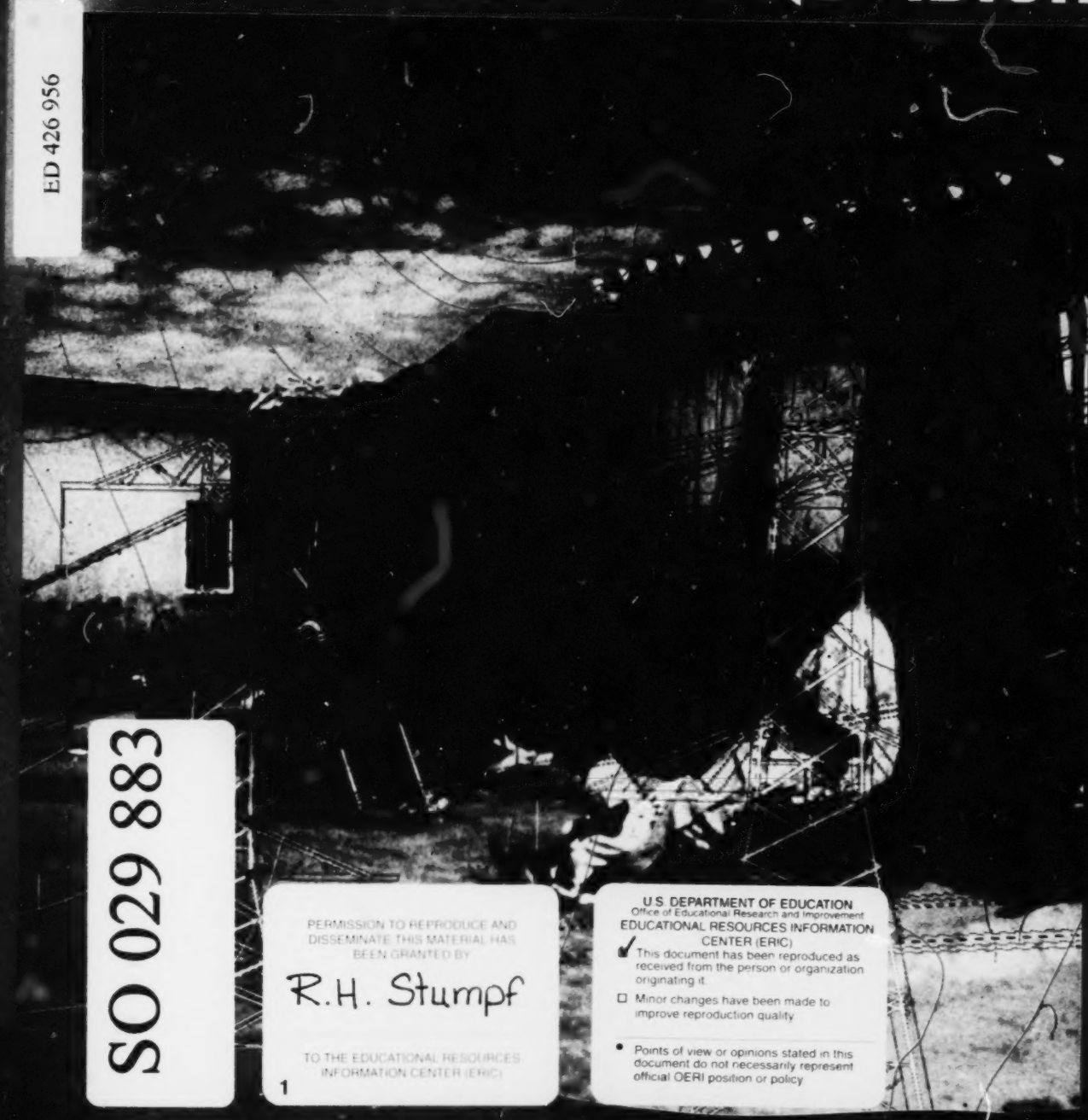

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NORTHERN CAPE

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SERVICE NEEDS AND PROVISION IN THE NORTHERN CAPE

SERVICE NEEDS AND PROVISION IN THE NORTHERN CAPE

Edited by

B.M. O'Leary
V. Govind
C.A. Schwabe
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Human Sciences Research Council
Pretoria
1998

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PREFACE

Little is known about the overall availability of services within the new provinces of South Africa in relation to fine-grained demographic distributions that are now becoming available through Geographic Information Systems (GIS) technology. Research that has been done on particular services such as water, sanitation and electricity, has largely been undertaken in isolation by parastatal and government service providers and has not contributed to a holistic picture of the availability of basic services. In addition, this information has largely been collected in report and tabular format without any spatial representation of service provision relative to demographic distribution.

In this publication an attempt is made to provide, for the first time, a more complete spatial analysis of socio-economic, demographic and service variables for the Northern Cape at magisterial district level. Similar publications have been produced for each of the new South African provinces. Not only will the location of needy communities be identified in the province, but the distribution of services such as water, sanitation, electricity, housing, education, health, roads, telecommunications, postal services, police services and even retirement facilities in relation to the demographic patterns of the province will also be established.

The demographic information is based on the 1991 Census data and the provision of services is based on information provided by organisations acknowledged in Chapter 5. When the 1996 Census data become available at enumerator area or magisterial district level, a temporal extension and trend analysis of this database could be undertaken if funding is available.

It is hoped that this publication will supply developers and planners with relevant information to assist in delivering and maintaining basic services. Development role-players at all levels should see the value of developing and maintaining spatially referenced databases that keep up to date with changing demographic and service patterns. The GIS Unit is currently compiling a database of the geographic location of development projects which will provide another important layer of information for decision makers.

J. Taylor
Regional Director
HSRC: KwaZulu-Natal Office

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The Human Sciences Research Council (HSRC) and First National Bank (FNB) provided the necessary funding required to develop this much-needed database which determines the spatial extent of service provision in the Northern Cape and thereby identifies underdeveloped communities.

Members of the HSRC's GIS Unit are thanked for all their contributions to the project and the final document. Mr V. Govind, Mr W. Mkonza and Mr C. White are acknowledged for their hard work in liaising with contributors, and also for producing the maps and tables. Mr Govind is further acknowledged for assisting with the production and editing of the final report.

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1

INTRODUCTION

The Human Sciences Research Council (HSRC) has identified the need for socio-economic information on the distribution of resources for infrastructure, services and facilities within South Africa as an important priority. This information will undoubtedly be required for the effective implementation of the Reconstruction and Development Programme (RDP) in the nine provinces.

Consequently, the Geographic Information System (GIS) Unit of the HSRC undertook a project aimed at showing the patterns of service delivery in the Northern Cape at magisterial district level and relating this to the socio-economic needs of communities within the province. Infrastructure and service facilities identified for incorporation into the project were education, health, water, sanitation, housing, electrification, roads, telecommunications, postal services, police services and retirement facilities.

In order to focus on districts with relatively poor socio-economic profiles and those which require assistance to improve their basic quality of life, the following variables were mapped: population density, pupil:teacher ratio, poverty, number of households and dependency. The information was combined into an equally weighted Combined Social Needs and Service Provision Index which identifies a range of districts in the Northern Cape as priority areas requiring the attention of provincial authorities.

Although some organisations have done a great deal of research on the availability of services in the province, none has provided the information in an integrated format which allows the distribution of these services and facilities within the province to be visualised. In addition, little work has been done to relate the provision of services to the needs of communities within the region. Consequently the GIS Unit of the HSRC undertook the project with the intention of entering the information into their GIS system and conducting analyses of the data sets. Maps reflecting the distribution patterns of services and underdeveloped communities in the Northern Cape could then be produced.

The production of the document required collaboration with many organisations to obtain information on service provision and provide perspectives as to why specific distribution patterns exist, as well as to outline future trends in meeting the basic service needs of the province. The document has been written to provide a source of information to national and provincial decision makers. In addition, it will be available to development funding agents and planners who provide much needed service infrastructure to needy communities in the Northern Cape.

2

THE CONCEPT OF GEOGRAPHIC INFORMATION SYSTEMS (GIS)

To many people the term Geographic Information System (GIS) is foreign and confusing. In essence, a GIS is a "system of computer hardware, software and procedures designed to support the capture, management, manipulation, analysis, modelling and display of spatially referenced data for solving complex planning and management problems" (Montgomery & Schuch, 1993). A GIS enables the transfer of spatial information from sources such as satellite images, aerial photographs, topocadastral maps and plans into a computer where the information is stored and analysed before being printed out as maps.

Geographic Information Systems (GIS) made their appearance in the late 1960s and 1970s. Some of the pioneering systems developed included those within the Harvard computer graphics laboratory and the Canadian GIS (CGIS). The driving force behind the development of GIS stemmed from the need for organisations to solve particular spatial problems whether they occurred in a business, academic, resource management, social or engineering environment. Specifically GIS was born to meet the ever increasing need to use and manage large spatially referenced data sets (Montgomery & Schuch, 1993).

GIS was introduced into South Africa in the early 1980s. Progress in its use was slow and South Africa lagged behind the rest of the world until fairly recently. The reason for this stems largely from sanctions that restricted the exchange in GIS use, software, education and training. However, by the late 1980s and early 1990s GIS had progressed significantly within South Africa to become an important tool in providing information needed by decision makers and planners in implementing programmes such as the Reconstruction and Development Programme (RDP).

The advantages of GIS are numerous. Aspects that make it indispensable as a decision-support tool include the ability to overlay and relate several layers of information, to conduct mathematical modelling of data sets, to develop spatial scenarios, to visualise development situations, and to construct spatial decision support systems. One of its major benefits is that it provides a quick and integrated way of viewing information. In addition, with advances in computer technology and software, it allows for the storage, management, manipulation, analysis and output of large data sets.

For these reasons the HSRC decided to use GIS as a tool in achieving its goals, particularly for projects such as the Service Needs and Provision project in the Northern Cape. GIS has enabled researchers in the GIS Unit not only to integrate data from a wide variety of sources but, in combining this data, to create new layers of information. Without GIS it would have been impossible to analyse and spatially represent service provision in relation to the population in the province.

3

SUMMARY SOCIO-ECONOMIC PROFILE OF THE NORTHERN CAPE PROVINCE

The Gini coefficient of income inequality for the Northern Cape is 0,57. This indicates a lower level of inequality than the South African average of 0,65. According to Smith (1987) 71,9% of the total South African population were blacks but only 25,5% of the total national income accrued to them. The whites earned 64% of the income, but comprised only 16,2% of the population. The Asians earned 3,2% of the total income and made up 2,8% of the population. The coloureds constituted 9,1% of the population and earned 7,3% of the total income.

The coefficient of advantage divides a group's income percentage by its population percentage. Scores above one indicate that a group's income percentage exceeds its population percentage. Conversely, scores below one indicate lower percentage earnings than population percentage. The percentage earnings of whites was 3,95 times their population percentage. The Asians were the only other group with a coefficient of advantage above one, 1,14. The coloureds and blacks both had coefficients of advantage of less than one, 0,8 and 0,35, respectively.

According to Whiteford *et al.* (1995) districts with a per capita poverty gap of over R500 were located in the southern and south-eastern parts of the Northern Cape province. Williston was the worst off district with a per capita poverty gap of R601. Other districts with a per capita poverty gap of over R500 were Sutherland (R570), Hanover (R541), Philipstown (R538), Fraserburg (R521), Richmond (R519), and Carnarvon, Kenhardt, and Colesberg (R508). The best off districts were in the northern, north-eastern and western parts of the Northern Cape. To the north, Postmasburg (R272), Gordonia (R333) and Kuruman (R338) had low per capita poverty gaps. Kimberley (R261) in the north-east had the lowest per capita poverty gap in the province. To the west, Namaqualand (R319) had a low per capita poverty gap.

In 1995 the dependency ratio in South Africa was 1,9 for persons in the 15 to 64 year category. The dependency ratio for the Northern Cape was 1,6, which means it was lower than most other provinces. By definition pensioners are dependants, but in many instances pensioners supported households with their meagre pensions. In many Karoo towns, as in many other settlements in the province, there was a high dependency on state allowances and pensions. The figures for Calvinia illustrate this: in a population of approximately 7 000, 1 083 people (approximately 15% of the population) received state allowances, mostly as old age pensions and disability grants. Many family members and relatives were also dependent on this income (Cole Consulting and Setplan, 1995).

According to Cole Consulting and Setplan (1995) the pupil:teacher ratio was within the accepted standards of 1:35 for primary school pupils and 1:32 for secondary

school pupils. The ratios at Northern Cape primary schools were 1:28 and 1:22 at secondary schools. There was no shortage of teachers on a provincial level. However, there was a shortage of teachers mostly in rural farm schools and at some schools in Kimberley. Furthermore, farm schools and some state schools also had teachers with less than Level B qualifications. Repetition rates for all schools were not available, but the average repetition rates for primary scholars were 18% and 16% for secondary scholars. However, the range spread from 0 to 67%. The high repetition rates do not correlate with inadequate pupil:teacher ratios, nor with urban as opposed to rural schools. Besides the fact that all schools with high rates were public or state schools, no other correlating factor was identified.

The use of socio-economic and service data provides a more complete picture of conditions throughout the province. The use of social and service indices, described in the next chapter, facilitates the use of a single index that summarises the effect of 5 social and 10 service variables.

4

APPROACH TO THE STUDY

4.1 Methodology

The aim of the project was to detail the access of the population to services in each magisterial district of the Northern Cape. This was not an exercise in mapping the exact location of pipelines supplying water to urban areas for example, but rather in mapping the percentage of households that have access to water supply. Thus the study has two main aspects; the socio-economic profile of the population in each magisterial district, and secondly, the relative access to these services between districts.

The socio-economic variables considered were

- population density
- total population
- employment
- dependency
- poverty
- functional literacy
- pupil:teacher ratios

The standard of living of the population within a magisterial district will often be an indicator of the access to services. Data relating to the socio-economic variables were obtained from the 1991 Census.

The services considered were

- education
- electricity
- housing
- roads
- water and sanitation
- post offices
- retirement dwellings
- health facilities
- police services
- telephones.

Data on these services had to be obtained from the service providers before being georeferenced and entered into a GIS database format. Once the accessibility of services to the population had been mapped, maps and tables were distributed to experts in each service field for their comment.

4.2 Social and service indicators

A global view or indicator of the simultaneous influence of all the social and service

indicators is necessary to encapsulate the social and service profile of each district. This will clearly arrange all districts along a social and service gradient, thereby facilitating prioritisation of districts for development interventions. This can be done firstly by developing indices for the social and service variables which represent the social and service profiles of each district. Thereafter these indices can be combined to give a single index of the level of development of a district. These indices were developed for districts at both the national and provincial levels. This allows comparisons to be drawn between national and provincial priorities which differ due to varying provincial and national minimum and maximum values per variable. The variables selected therefore needed to have complete data coverage at both national and provincial levels.

The selected social variables were the poverty gap, pupil:teacher ratio, dependency ratio, total households, and population density. The service variables were the ratios of population to police stations, post offices and hospital beds; the ratio of road length to district area; the ratio of 6 to 17 year olds to schools; the percentages of fully serviced houses, informal houses, formal houses electrified and informal houses electrified and telephone shares. The social index had five variables each with twenty ranges giving a total number of 100 ranges. Additional columns were created to assign the rank of the variable per column. The theoretical minimum and maximum social index value would then be 5 and 100 respectively. The values for each variable could not be ranked in ascending order in all cases. High values in poverty, pupil:teacher ratios, dependency and population densities suggest underdevelopment, but a high value for total households would not. High index scores indicate underdeveloped districts needing development interventions. The corollary to this is that a district not requiring development intervention based on a social index would have a low index score and the following social profile: a low poverty gap, low pupil:teacher ratio, low dependency ratio, low population densities and a high number of households.

The service index had ten variables each having ten ranges. Here the theoretical minimum and maximum values are 10 and 100, respectively. Each service variable had to be ordered according to whether high scores were beneficial to a district or not. A district with a low service index score and not requiring development intervention would have the following service profile: low ratios of population to police stations, post offices and hospital beds; a high ratio of road length to district area; a low ratio of 6 to 17 year olds to schools; high percentages of fully serviced houses, formal houses electrified and informal houses electrified; high telephone shares, and a low percentage of informal houses. A district with a high index score requires development intervention and would have the following service profile: high ratios of population to police stations, post offices and hospital beds; a low ratio of road length to district area; a high ratio of 6 to 17 year olds to schools; low percentages of fully serviced houses, formal houses electrified and informal houses electrified; low telephone shares, and a high percentage of informal houses.

A combined index would add the service and social indices, both having a maximum of 100, and divide the sum by 2, giving a maximum to the combined index of 100. As in the social and service indices, the higher the combined index score the greater the degree of underdevelopment.

4.3 Spatial scales

Originally, the spatial analysis of service provision was to be based on the enumerator areas (EAs) from the 1991 Population Census, but for logistical reasons, outlined below, it was decided to confine the analysis to census districts. An EA is the smallest building block of the census and has been defined by the Central Statistical Service as "consisting of a number of visiting points ... a visiting point is any occupied unit, e.g. a house, flat, caravan, hotel etc." As one would expect, EAs are denser in urban areas than rural areas. Census districts are groupings of EAs and, in most instances, follow similar boundaries to magisterial district boundaries.

The reason for the shift in focus from EAs to census districts is that most of the information on services and service provision is not readily available at EA boundary level but has been collected and is available at census district level. In addition, the provision of information at this level will provide decision makers and planners at a national and provincial level with appropriate information. Once verified that an area is in need of services, more detailed information, which is not presently available at a detailed level such as EAs, can be collected.

Having said this, there are obvious problems in the analysis of service provision on a census district scale. The major problem is the fact that there is a tremendous variation (demographic as well as in service provision) within districts. Within a single district there may be well-provided formal towns, while the sparsely populated rural areas may have high poverty levels and the worst rates of basic service provision. When one analyses services at a census district level, these variations could be lost in averaging and aggregation.

4.4 Data problems associated with choice of spatial scale

Much of the service supply data acquired from the service providers was at a town level. So, for example, information was obtained for towns that have post offices, a number of pre-school facilities, etc. Each of the towns was then identified and placed in the correct census district. Often towns were not in the census database or on maps or atlases and thus personal knowledge and experiences had to be relied upon.

The problems that have been highlighted above, stress the need for better data collection, as well as the need to set standards on the spatial scales at which data is collected. This would greatly improve analyses in this field and be an indispensable source of information to planners and service providers. The use of GIS will facilitate this process since spatial units already exist at different scales from which data can be aggregated. Not only will this result in the standardising of databases, but it will also assist in the provision of information over several years and enable trend analyses to be done.

4.5 Problems associated with obtaining data from service providers

One of the main problems encountered in this project was the lack of clear definitions of services. This resulted in information being entered into the GIS and maps being produced for comments by the service providers, only to discover that not all, or

conversely too many, facilities had been included in the definition of that service. It was thus important to establish a clear understanding of what is meant by a service and what facilities form part of such a service.

Service providers were largely unfamiliar with the GIS and how it could be used. This often resulted in the provision of information that could not easily be entered into the GIS, thus forcing the research team to assess the information before including it in the data set. However, through a process of consultation, this problem was largely addressed and only relevant information was entered.

The format of information on services was often unsuitable for incorporation into the database. This meant the research team had to spend many hours converting the data into a suitable format. In addition, it was not always easy to enter digital or database information from other sources into the GIS, but eventually ways were found to transfer all the data into the GIS software.

Other aspects which plagued the project were inaccuracies in the different data sets, outdated databases and a lack of verified information. Producing maps from a GIS often makes it possible to identify inaccuracies in the information and make subsequent corrections. Experience suggests it is necessary to plan for such delays well in advance.

In solving these problems, the GIS team of the HSRC has added to its expertise in the fields of spatial database development and GIS research. As a result of this report there is now a comprehensive collection of spatial and attribute data related to service provision for census districts in the Northern Cape. This database can be further developed, refined and provided to any organisation involved in service provision and development in the province.

5
INFORMATION SOURCES

Research on providers of service information and literature reviews was conducted by members of the GIS Unit. All the major known service providers were contacted and appropriate data sources identified. Although attempts were made to obtain recent and comprehensive sources of information, it is acknowledged that more definitive databases may exist elsewhere in the country.

It must also be repeated that certain data sets may have inherent inaccuracies (see Introduction). However, what is important is that the information was obtained from the best known sources and, in some instances, the only known sources. The information is therefore considered the best base available for use by the RDP and from which more refined data can be gathered.

SERVICE TYPE	SOURCE OF DATA	FORMAT AND LEVEL OF DATA	DATE CAPTURED	ORGANISATION
Demographic information	Spatial data captured from 1:50 000 (rural areas) and 1:6 000 (urban areas). Database extracted from 1991 Census	Digital data at census district level	1991	Human Sciences Research Council CSS
Education facilities and indicators	Education Atlas of South Africa	Digital data at a census district level	1994	Education Foundation
Health facilities and utilisation	ReHMIS	Digital data at a point location level Tabular data at health region level	1994 1996	Department of Health Health Systems Trust
Poverty levels	1991 Census Poverty database	Digital data at a census district level	1991	Human Sciences Research Council
Post office	Post Office: Sales & Marketing Department	Tables at a district level	1994	Post Office
Telephone lines	Telkom: Technology strategy	Tables of residential line shares at district level	1995	Telkom
Roads	Surveyor General	Line digital data	1991	Surveyor General
Water supply and sanitation	National Electrification Forum (NELF)	Digital data at a census district level	1994	Eskom
Electricity supply	National Electrification Forum (NELF)	Digital data at a census district level	1994	Eskom
Police facilities	SA Police Services	Tables at a magisterial district level	1994	SAPS

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6

SOCIAL FACTORS HIGHLIGHTING THE NEED FOR SERVICES IN THE NORTHERN CAPE

6.1 Total population

Introduction

This discussion on population dynamics in the Northern Cape is broken down into the following sections: population policy and total population.

Population policy

The Draft White Paper for a Population Policy published in September 1996 recognises the important interrelationship between population, development and the environment. It defines sustainable human development as "meeting the needs of the present generation and improving their quality of life without destroying the environment or depleting non-renewable natural resources, in order to avoid compromising the ability of future generations to meet their own needs" (*Government Gazette*, 1996:7). Guided by this definition a number of population concerns and their underlying factors are identified. These population concerns cover four main areas:

- Lack of the availability, use and analysis of population data, especially as related to development planning, as well as a lack of institutional and technical capacity for the analysis of population data and for integrated population and development planning.
- Problems related to characteristics of the population itself. These include the structure of the population, the high incidence of fertility and unwanted teenage pregnancies, and high rates of premature mortality, infant mortality and maternal mortality.
- The inadequate analysis of problems related to migration and settlement patterns such as the causes and consequences of urban and rural settlement patterns as well as the nature and impact of international immigration.
- Problems related to population growth and population pressure in relation to the growth of the economy such as the backlog of social needs to be met, high levels of unemployment and the impact on the environment of population pressure and production and consumption patterns.

The Draft White Paper on Population recognises the link between factors such as poverty, high mortality rates, low status of women, a lack of democracy and high fertility on the one hand, and population growth rates on the other. Strategies have been adopted which will address these concerns. In the past, population policy was aimed mainly at fertility control, restricting migration and controlling settlement patterns. The new policy aims to address the problem of population pressure by influencing the determinants of high population growth through a wide range of strategies which include reducing poverty, improving primary health care services,

addressing environmental issues, promoting responsible and healthy sexual and reproductive behaviour in young people, improving education for all and through improving the status of women. In order to reduce population pressure in rural and urban areas the policy aims to provide improved social services, infrastructure and employment opportunities in rural areas through rural development. This should slow down the rapid rural-urban migration and improve the capacity of rural areas to provide a livelihood for people living there.

K.A. Leslie
(Formerly of the University of Venda)

Total population

The map shows that only six districts have populations of more than 29 000, namely Kimberley, Hartswater, Barkly West, Postmasburg, Gordonia and Namaqualand. These districts account for nearly, 65% of the population of the province. Kimberley itself accounts for 23% of the regions population. This can mainly be attributed to mining activities in the region of Kimberley, Barkly West, Postmasburg and Alexander Bay. Intensive agricultural activities next to the Orange River near Upington and the Vaal River near Hartswater contribute to the high population of the Gordonia and Hartswater districts. It is also evident that two thirds (66%) of people in the province are located in the north and north-eastern region (this includes the following districts: Herbert, Kimberley, Warrenton, Hartswater, Postmasburg, Kuruman and Gordonia).

The southern districts have lower populations mainly because the economies of most of these districts are based on agriculture and specifically on stock farming.

Since 1985 there has been growth in the districts of Herbert (37,5%), Barkly West (22,1%), Postmasburg (21,1%) and Hartswater (20,6%). This can be attributed either to mining and or more intensive agricultural related activities. The regions with the greatest fall in population numbers are Prieska (5,7%), Sutherland (4,8%) and Hanover (3,6%). This may be attributed to the worsening agricultural conditions away from the Vaal and Orange Rivers.

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and
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MAP 1 : TOTAL POPULATION

Source : CSS, District Census 1991

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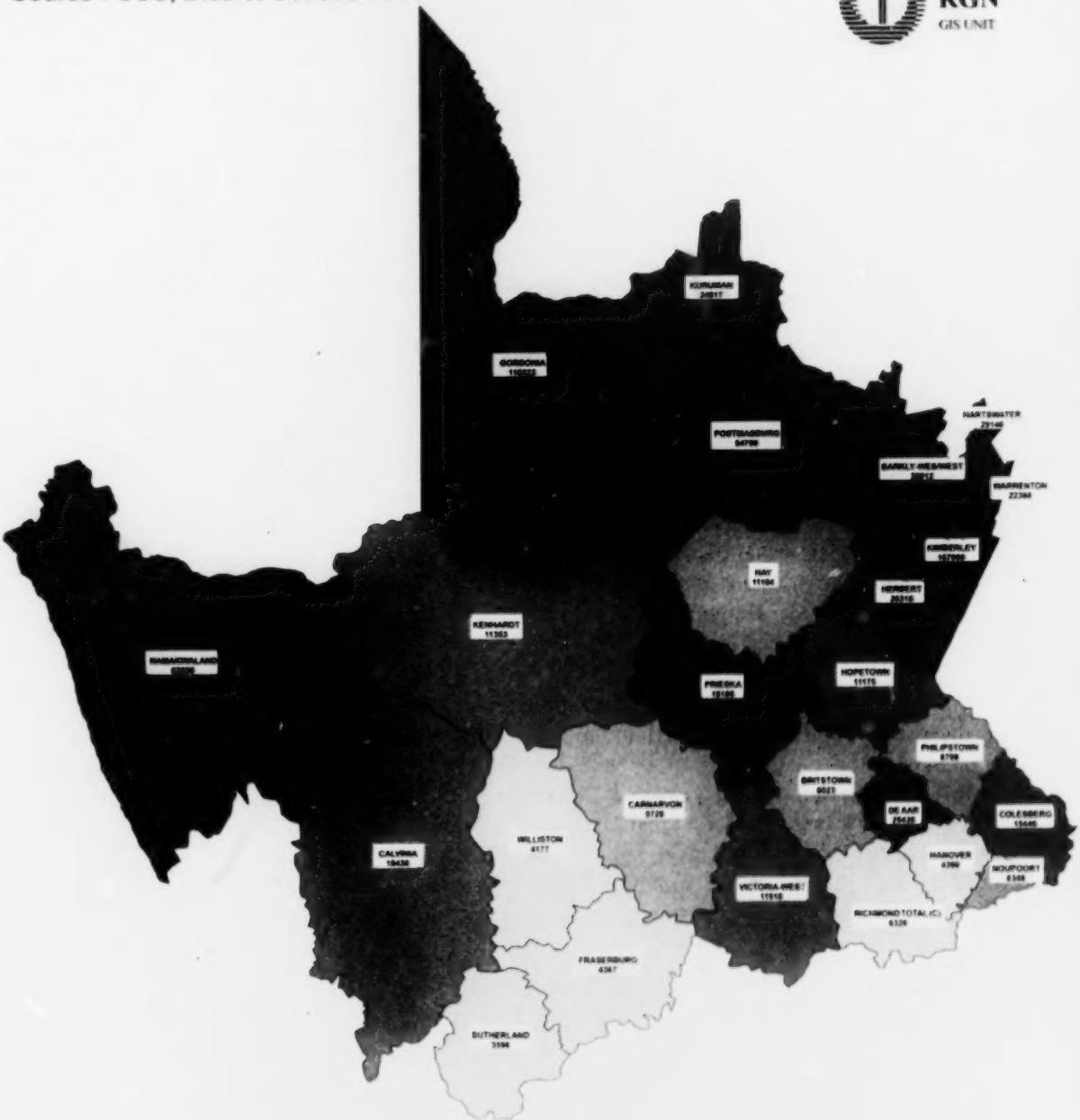

Total population

- 3 596 to 6 326
- 6 326 to 11 104
- 11 104 to 18 430
- 18 430 to 29 146
- 29 146 to 167 060

N

KM

100

Table 1: Total population

DISTRICT	TOTAL POPULATION
Barkly West	35 012
Britstown	6 523
Calvinia	18 430
Carnarvon	9 728
Colesberg	15 446
De Aar	25 438
Fraserburg	4 367
Gordonia	118 623
Hanover	4 399
Hartswater	29 146
Hay	11 104
Herbert	26 316
Hopetown	11 175
Kenhardt	11 353
Kimberley	167 060
Kuruman	24 817
Namaqualand	62 536
Noupoort	8 348
Philipstown	8 799
Postmasburg	54 790
Prieska	19 185
Richmond (C)	6 326
Sutherland	3 596
Victoria West	11 910
Walvisbaai/Bay	22 999
Warrenton	22 368
Williston	4 177

6.2 Employment

Households need access to gainful occupation to earn an income to survive.

The formally employed, the informally employed and the unemployed together make up the economically active population. The economically active population in the Northern Cape grew from 264 230 in 1980 to 277 592 in 1991, a rate of 0,4% per annum which exceeded the population growth rate. The data used in the following sections on employment have mostly been taken from the 1980 and 1991 Population Censuses. The October Household Survey 1994 has also been used.

Formal sector employment

Formal sector employment is defined as all employers, employees or self-employed people participating in the formal economy. They are commonly referred to as people with jobs. The most important feature of formal sector employment in the Northern Cape is its decline. Total formal sector employment shrank by 2,3% per annum from 1980 to 1991. In 1991 there were 175 774 formal sector jobs in the province, a reduction of 50 360 from the 226 134 of the 1980 Census. In other words more than one in every five formal sector jobs were lost between 1980 and 1991, due mainly to the rapid decline of mining employment during the 1980s. The Northern Cape was the only province to see an absolute decline in formal sector employment from 1980 to 1990, illustrating the desperate need for new employment opportunities in the province.

Absorption capacity measures the ability of the formal economy to absorb the economically active population. The absorption capacity of the formal sector fell dramatically during the 1980s from 85,6% in 1980 to 63,3% in 1991. In terms of the extended labour force, which includes non-market activities not measured in the System of National Accounts (SNA), absorption capacity fell from 72,7% to 52,9% in the same years. This illustrates once again the historically strong provincial economy of the Northern Cape had greatly declined in the 1980s.

Despite the fact that the Northern Cape had the slowest population growth in the country, a progressively smaller proportion of the population was able to enter formal employment, a trend which created special problems for school leavers and the youth. The 1980s saw a consequent rise in unemployment, and in participation in the informal and marginal sectors as households attempted to support themselves in other ways. The decline in formal jobs spread across almost all SIC sectors, with only finance and business services expanding marginally.

1994 October Household Survey data indicated that there is every reason to expect this trend to have continued to the present, with a further decline in opportunities for new entrants to the labour market. The survey concluded that there were 188 801 workers in the province in October 1994, of whom 25 453 worked for their own account mostly in the informal sector. This gave an estimate of formal employment of 163 348, a further decline in employment from the 1991 Census. It must be emphasised that the data sources for the census and the household survey are different so the results are not strictly comparable. The size of the decline indicated by the household survey however shows a continued decline in formal sector employment to the present time.

For the province as a whole, formal employment was heavily concentrated in the government which in 1991 provided 34,0% of all employment. The next two most important sectors were agriculture (22,3%) and mining (12,4%) respectively. These three sectors provided nearly 70% of all formal sector employment in the province. The importance of agriculture as a formal employer should be noted. Nearly a quarter of all formal jobs are provided by the sector with further opportunities for casual and seasonal work.

From 1980 to 1991 the distribution of formal sector employment between these three principal sectors changed considerably. During the 1980s the government gained relative importance as a source of jobs. As government employment gained increasing prominence, mining sector employment declined steeply. Agriculture increased its share of formal employment during the 1980s despite a drop in formal employment. Transport and communications and construction declined in relative importance during the 1980s, while other sectors maintained their relative importance.

The concentration of formal employment in the government and the two primary sectors reflects both the historic strength of these sectors and the relative weakness of the Northern Cape economy. Of the two primary sectors, mining is declining in the long term and employment in agriculture is vulnerable to climatic and market fluctuations. The overconcentration of formal employment in declining and vulnerable sectors has led to an absolute decline in formal sector employment which, based on the most recent statistics, is a feature of the Northern Cape only and no other province. Declining absorption capacity features in other provinces as well and is partly the result of long-term and progressive substitution of capital for labour in traditional industries since the 1970s. The absolute decline in formal employment is, however, of great concern and the lack of emerging sectors in the Northern Cape makes the problem of formal job creation particularly acute.

Informal sector employment

The informal sector has grown in importance in the Northern Cape as a result of the declining absorption capacity of the formal sector. It is extremely difficult to estimate the size of the informal sector as workers often classify themselves as unemployed in some surveys and as informal sector workers in others. Figures from the 1980 and 1991 Population Censuses, however, show strong growth in the informal sector. The number of informal sector workers increased from 17 894 to 46 304. The proportion of the economically active participating in the informal sector rose significantly, from 7,6% to 20,0% over the same period, as workers entered the informal sector in response to the lack of formal sector jobs.

It is interesting to note the change in distribution of the informal sector between 1980 and 1991. In 1980 the proportion of the economically active participating in the informal sector varied from as low as 1,7% in De Aar to as high as 13,7% in Noupoort. By 1991 the range had narrowed considerably. The lowest participation of the economically active was 19,0% in Victoria West and the highest participation was 20,8% in Kuruman. Participation in the informal sector is now seen to be a province-wide phenomenon with little regional variation.

It is also important to note the most recent data on the informal sector: the Central Statistical Service's (CSS) 1994 October Household Survey indicated a decline in informal sector participation to 29 835 workers. This was probably due to more people classifying themselves as unemployed rather than as informal sector workers.

The Household Survey does however give the most recent statistics by SIC composition of the informal sector in the Northern Cape: of the 29 835 stated informal sector workers, 82,4% were working in the community, social and personal services sector and 10,2% were working in wholesale, retail and catering. The survey also estimates a monthly value added income earned produced by the informal sector of R23,9 million, of which 58,6% comes from the wholesale, retail and catering sector and 26,1% from community, social and personal services.

The main organisation offering support to informal businesses is the Small Business Development Corporation (SBDC) which has provided loans, advice, training and business premises to small and medium enterprises (SMEs) since 1981. The SBDC has full-time offices in the Northern Cape in Kimberley, Upington, and Springbok with part-time advice centres in De Aar and Postmasburg. Currently business premises are let to 80 tenants in Kimberley, Upington and Springbok. Since its inception the SBDC has provided R55,6 million in loans to clients in the Northern Cape.

Pioneer loans is the SBDC term for a series of loan schemes geared to informal and semi-formal SMEs. Two-thirds of all pioneer loans since its inception have been to enterprises providing retail and representative services. Forty-one per cent of all loans by number and 6,7% of loans by value have been pioneer loans. Mini loans are the type of loan specifically geared to informal enterprises and provide loans to micro enterprises to a maximum value of R6 000 for up to 12 months. Twenty-five per cent of loans by number and 1,6% of loans by value have been miniloans. The SBDC has recently targeted informal and semi-formal SMEs for additional loans under the pioneer programme. However, figures show that SBDC loans have mostly gone to formal SMEs who tend to be larger and have both the need and ability to absorb larger loans.

The SBDC loan profile reflects a dearth of loan assistance to the informal sector, a factor supported by the consultants discussions with informal sector organisations in the Northern Cape. The South African Black Taxi Association (SABTA), the Kimberley Industrial Council, the Kimberley African Federation of Chambers of Commerce (KAFCOC), the Foundation for African Business and Consumer Services (FABCOS), the Kimberley Chamber of Industry, the National Tuckshops Association, the Black Business Forum, the African United Small Mining Association and the African Chamber of Hawkers and Informal Businesses (ACHIB) were all contacted by the consultants. Some of these organisations represent formal businesses as well as the informal sector.

Although these organisations had different perspectives depending on the needs and interests of their members, all expressed a need for better support to the smallest informal sector enterprises, especially the micro enterprises starting to operate. The most commonly expressed need was for better access to credit. The organisations felt that both the availability of loans and their terms and conditions, from both banks and the SBDC, needed to be improved to enable the smallest SMEs to start operating and

to grow. The size of the loan needed to start an informal business was quite small, for example R1 200 on average to start a tuckshop. Many of the organisations expressed their willingness to tie loans to training in business skills.

The result of this discussion has been that large numbers of people have entered the informal sector in the Northern Cape as formal sector job opportunities have declined. It must be realised that many, possibly most, informal enterprises are a response to this decline in the formal sector and that people are rarely in the informal sector by choice. The province is however in a situation where a large and growing number of informal businesses require support in order to grow and develop. While it is understandable that financial institutions have concentrated on formal SMEs in the past, the growth of the informal sector requires that the provincial government and the private sector jointly establish the necessary approaches to provide these many, new micro enterprises with access to credit, training and facilities in order to grow.

Unemployment

Unemployment is undoubtedly on the rise in the Northern Cape as formal job opportunities decline. From 1980 to 1991 the numbers of people actively looking for work, but not employed rose from 17 894 to 46 304. This reflected a percentage increase from 6,8 to 16,7% of the economically active population. This strict definition of the unemployment rate is analysed below by region for the same period. Analysis since 1991 is complicated by the fact that the official definition of the unemployment rate changed in 1993 to an "expanded" definition, which includes unemployed persons having the desire to work and take up employment. Both the strict and expanded definitions of the unemployment rate are covered in the October Household Survey 1994 and are discussed below. Despite the differences in definition, unemployment shows a strong increase throughout the 1980s and into the 1990s. Analysis starts, however, with regional changes during the 1980s, bearing in mind that the unemployment rates referred to for 1980 and 1991 are by the strict definition.

In 1991 the Kalahari region had an unemployment rate of 11,2%, a relatively low rate in comparison with the rest of the province, but a big increase on the 3,0% of 1980. Mining declined greatly in the region during the 1980s but was still a major employer in 1991 resulting in a lower than average unemployment rate.

The 1991 unemployment rate was highest in the Diamond Field region at 18,8%. This was also the case in 1980. This statistic reflects the high concentration of provincial economic activity in the region. With a downturn in the provincial economy the absolute numbers of unemployed in the Diamond Field have increased. In 1991, 21 500 people were unemployed in the Diamond Field, representing nearly half of all people unemployed in the province.

The Lower Orange unemployment rate rose from 6,9% in 1980 to 17,0% in 1991, and was very close to the provincial average for both years. The characteristics of unemployment in the Lower Orange are similar to those of the Diamond Field, reflecting the region's status as the second largest regional employer by 1991. Again, with a decline in most sectors during the 1980s, unemployment increased markedly in the Lower Orange.

The North West region had the lowest unemployment rate in 1991, 10,7%, rising from a very low level of 3,5% in 1980. As noted earlier, the structure of the labour market has not changed much over time, resulting in greater stability in employment patterns. The North West region has also been a net provider of migrant labour for many years. These factors contribute to its relatively low unemployment rate by provincial standards.

Unemployment increased steeply in the Upper Karoo region during the 1980s, from 7,5% in 1980 to 18,5% in 1991. This was due to the economic decline of a number of sectors, notably mining and transport.

In 1991 the unemployment rate in Namaqualand was 14,3%, surprisingly lower than the provincial average given the decline in mining in the region. It has already been noted, however, that mining employment in Namaqualand did not decline as steeply as mining output, hence the lower rate of unemployment. The unemployment rate did, however, rise from a very low base of 4,6% in 1980 and this increase was due to the decline in mining.

The most recent figures for unemployment were taken from the 1994 October Household Survey and reflected a far higher level of unemployment than the 1991 Population Census returns. The Household Survey concluded that 90 931 people were unemployed in the province by the expanded definition, a rate of 32,5%. The corresponding figure by the strict definition was 74 026 (28,2%). As argued above, these figures may have overstated the numbers of unemployed as a result of significant numbers of informal sector workers responding as unemployed for the purposes of the survey.

The Household Survey did, however, give the most recent figures on the composition of unemployment in the province. Unemployment rates were far higher for women than for men, with 44,8% and 39,1% of economically active women unemployed according to the expanded and strict definition of unemployment respectively. Unemployment was also concentrated among the relatively young, a consequence of declining formal sector opportunities. Fifty-six per cent of the expanded definition unemployed were under the age of 30 and 73% were below 35 years of age. Sixty-four per cent of the unemployed by the expanded definition had passed only Standard 6 or less, indicating the need for improvements in education and the skills base of the workforce. The lack of education seemed to affect the unemployment situation as the education levels of the unemployed reflected those of the population as a whole. Fifty-one per cent of the unemployed by the expanded definition had never worked and were most likely to have been the young unemployed who had never entered the labour market.

Figures for registered unemployment showed a total of 6 157 registered unemployed in the province in October 1994, i.e. 8,3% of the unemployed by the strict definition. This indicated the number of people in receipt of unemployment benefit and it can be seen that the Unemployment Insurance Fund covered a very small proportion of those actually unemployed. It must be remembered, however, that the Fund covers only workers who have previously contributed to it: in other words, unemployed persons who have previously been employed for significant periods of time. The Household

Survey showed that half the unemployed had never worked.

These figures for the Northern Cape showed high and increasing levels of unemployment that were directly related to the decline in formal sector opportunities. Unemployment was concentrated among the women, the young and the less skilled or educated. These rates pose a challenge to the future to both raise skills and reverse the absolute decline in formal employment in the province.

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Department of Economic Affairs and Tourism

MAP 2 : PERCENTAGE 15 TO 64 YEAR OLDS EMPLOYED

Source : 1991 Census

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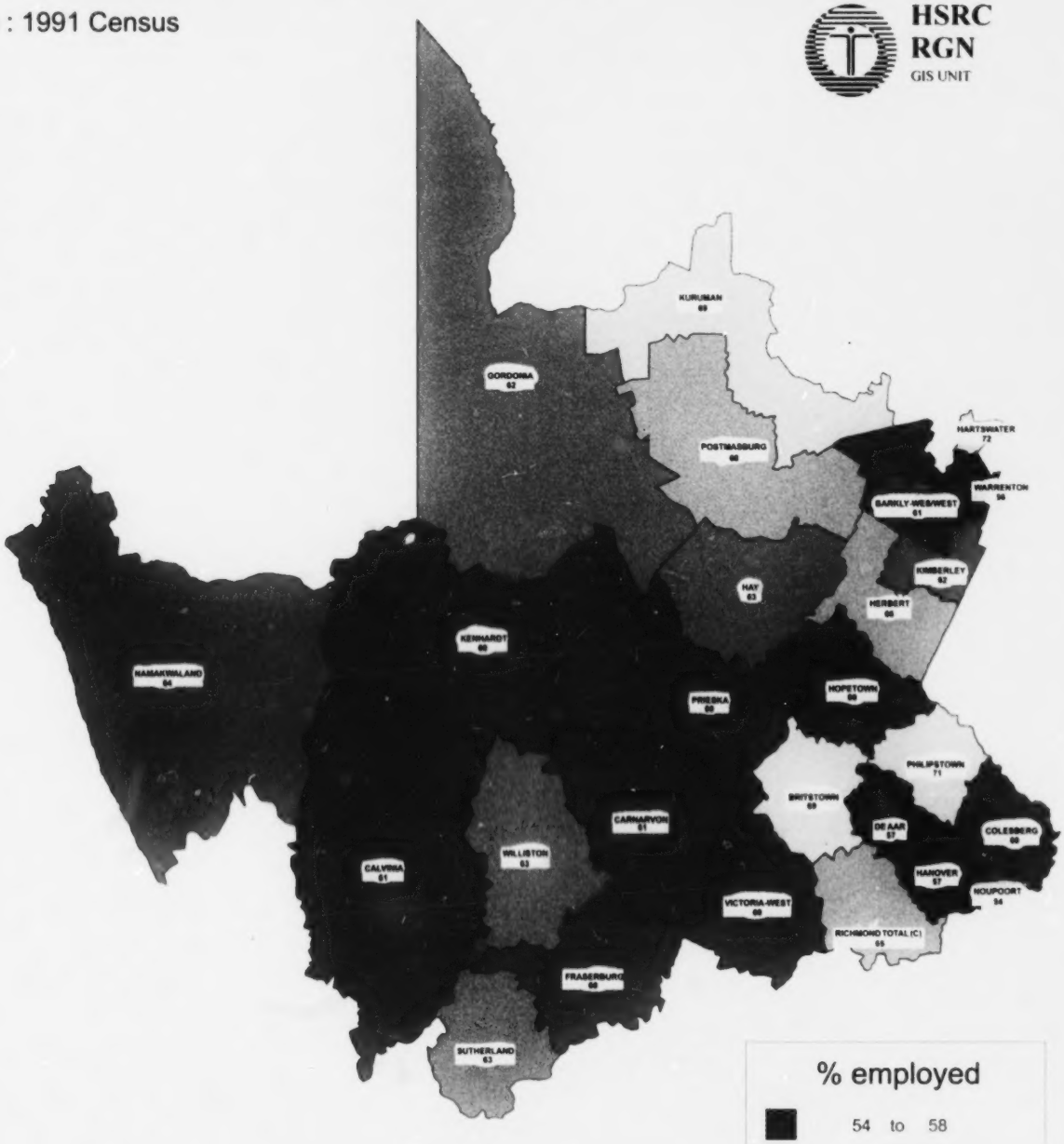

% employed

	54 to 58
	58 to 61
	61 to 65
	65 to 68
	68 to 72

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Table 2 Percentage 15 to 64 year olds employed

DISTRICT	ECONOMICALLY ACTIVE	15 TO 64 YEARS	% 15 TO 64 EMPLOYED
Barkly West	12 678	20 852	61
Britstown	2 555	3 708	69
Calvinia	6 660	10 929	61
Carnarvon	3 588	5 847	61
Colesberg	5 213	8 684	60
De Aar	8 796	15 330	57
Fraserburg	1 624	2 691	60
Gordonia	44 066	71 445	62
Hanover	1 370	2 384	57
Hartswater	12 682	17 706	72
Hay	3 889	6 129	63
Herbert	9 845	14 956	66
Hopetown	3 771	6 238	60
Kenhardt	3 981	6 623	60
Kimberley	67 562	108 302	62
Kuruman	10 616	15 423	69
Namaqualand	25 018	39 245	64
Noupoort	2 287	4 222	54
Philipstown	3 475	4 885	71
Postmasburg	24 291	35 548	68
Prieska	6 831	11 320	60
Richmond (C)	2 288	3 538	65
Sutherland	1 375	2 197	63
Victoria West	4 159	6 877	60
Warrenton	7 404	13 231	56
Williston	1 565	2 485	63

6.3 Functional literacy

According to the Development Bank of South Africa, in 1991, 61% of South Africans older than 13 years had completed Standard 5. The Northern Cape lead by the Western Cape and Gauteng, had the third highest percentage of 68% (DBSA, 1991). However, the October Household Survey 1994 calculated that only 59% of the Northern Cape population older than 15 years had passed Standard 5. Furthermore, it was estimated that while 98% of the whites could be considered literate, only 52% of the coloured and 46% of the blacks were.

The 1991 Census found that education levels in the younger adult groups were higher as a result of past improvements in education. The inhabitants of urban areas were often more educated than their rural counterparts, for example only 12% of the Herbert rural population was literate, while 33% of the urban population was literate. This situation can be expected to occur throughout the rural areas, especially in areas with an agricultural base as agriculture is one of the few employers of illiterate adults.

Districts with higher levels of literacy such as Kuruman, Postmasburg and Namaqualand attract migrant workers. In-migration areas are educationally selective. Consequently, if higher education makes employment and resources more accessible, it will result in higher incomes and improved economic welfare.

Education and training facilities

According to Cole Consulting and Setplan (1995), every town had at least one primary school and primary level farm schools were also available. For the entire Calvinia district there was only one secondary school with 700 pupils in Calvinia.

Although primary schools appeared to be well distributed throughout the province, secondary schools were sparsely distributed. Few secondary schools had accommodation facilities, although scholars were accommodated by families in these towns. This situation appears to be less than ideal and the feasibility of transport to school as opposed to the cost of accommodation should be investigated.

In terms of physical capacity there did not appear to be any shortages in either primary or secondary schools.

There were very few pre-primary education facilities, a level that is increasingly regarded as important. In 1994 only 1 639 pre-schoolers enjoyed pre-primary education. However, more pre-primary facilities are being phased in as an increase in enrolment of 35% from 1993 to 1994 shows (Department of Education, 1994).

Cole Consulting and Setplan (1995) also found that special education for mentally and physically handicapped scholars was available in Kimberley, and that mentally handicapped adults were also catered for.

Furthermore, while the capacity of technical colleges in the Nothern Cape exceeded enrolment (950 places were vacant), three new training institutions were opened in De Aar, Hartswater and Upington. The goal of the Department of Education and Training to have at least one community college per region will do much to improve access to

training, especially in those regions where no post-school facilities exist, such as in the North West region. Satellite-linked television and radio education could play a major role in bringing good quality education to sparsely populated rural areas.

In 1995 no major school building projects had been proposed, but the rehabilitation of 33 schools was planned with funding from a R7,5 million RDP budget. Only two new primary schools and one high school were planned, while the utilisation of current facilities such as schools for adult education would lead to better utilisation of existing facilities.

The School Building Trust had been established to assist in the construction of classrooms where there are none or where classrooms are overcrowded in rural areas. This Trust also helps to acquire land if necessary. Construction materials are provided by the Trust and the communities supply the labour for remuneration. No projects had been approved to date, but applications had been received from Colesberg, Hartswater, Kimberley, Upington, Gordonia and Namaqualand. Funding of R12 million had been received from the IDT as a biannual budget. (Cole Consulting and Setplan, 1995).

Farm and rural schools

The survey found that rural schools were the most problematic because of the vast range of problems. Most of these problems seem insurmountable mainly because of financial and logistical constraints that are inevitably coupled to the vast distances between schools. Even though clustering of schools has been suggested as a possible solution, this option still presents many problems because of the distances between such clusters.

Critical problems facing rural schools

- Long distances which pupils have to travel in order to get to the school
- Lack of accommodation for teachers
- Lack of skilled and qualified teachers
- Disruption in attendance due to the use of child labour on the farms
- Premature school leaving
- Inefficient feeding schemes
- The attitude of the manager/owner of the school and the lack of parental and community participation in the governance of the school
- Lack of a proper contract between the Department of Education and the owner of the school
- Inadequate and insufficient hostel facilities
- The difficulty in enforcing the pupil:teacher ratio policy

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MAP 3 : PERCENTAGE FUNCTIONAL LITERACY

ADULTS WITH AT LEAST STANDARD 4 EDUCATION

Source : 1991 Census

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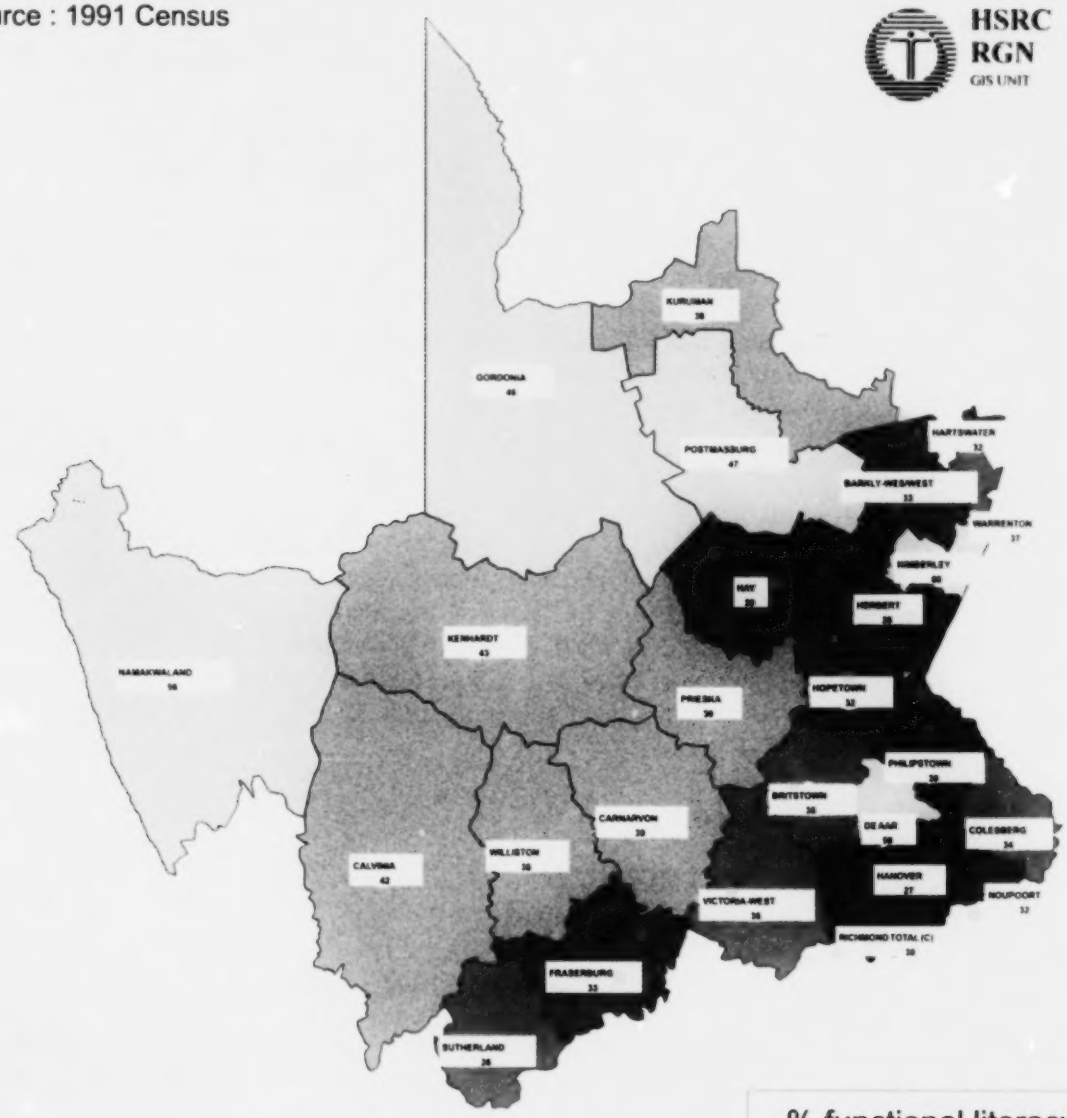

% functional literacy

- 26 to 30
- 30 to 33
- 33 to 37
- 37 to 43
- 43 to 60

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Table 3: Percentage functional literacy: adults with at least Standard 4 education

DISTRICT	15 TO 64 YEARS	% FUNCTIONAL LITERACY
Barkly West	20 852	33
Britstown	3 708	35
Calvinia	10 929	42
Carnarvon	5 847	39
Colesberg	8 684	34
De Aar	15 330	50
Fraserburg	2 691	33
Gordonia	71 445	46
Hanover	2 384	27
Hartswater	17 706	32
Hay	6 129	29
Herbert	14 956	26
Hopetown	6 238	32
Kenhardt	6 623	43
Kimberley	108 302	60
Kuruman	15 423	38
Namaqualand	39 245	56
Noupoort	4 222	32
Philipstown	4 885	30
Postmasburg	35 548	47
Prieska	11 320	39
Richmond (C)	3 538	30
Sutherland	2 197	36
Victoria West	6 877	36
Warrenton	13 231	37
Williston	2 485	38

6.4 Poverty gap

"The simplest measure of poverty of a region is the number of households living in poverty. While the poverty head count ratio is a convenient measure of poverty, it is insufficient as it only gives an indication of the incidence of poverty. A reliable measure of poverty should also encapsulate the depth of poverty. In other words we are interested not only in the proportion of households below the poverty line but also how far those households are below the poverty line. A measure which incorporates both incidence and depth is the poverty gap, which is calculated by summing the differences between the income of each poor household and the poverty line. The poverty gap is of great policy significance since it indicates the theoretical minimum government transfer to poor households needed to totally eliminate poverty. Of course, transfers are only one anti-poverty policy option available to governments. Income generating opportunities for poor people have to be created and those people provided with the capacity to use the opportunities" (Whiteford *et al.*, 1995:8).

"In 1993 the total poverty gap in South Africa was just over R15 billion, which amounted to less than five percent of gross domestic product. The size of the poverty problem is thus small relative to the size of the economy, but the number of individuals involved is enormous" (Whiteford *et al.*, 1995:9).

The poverty gap does not measure the number of people in poverty but is rather a measure of how poor people are. Unlike a headcount ratio, which counts only the number of people below the poverty line, the poverty gap measures how far each individual is below the poverty line. It therefore measures how much money is required to bring each poor person's income up to the poverty line in a given year (Erasmus: DBSA).

"Poverty gaps for districts can be misleading as they take no account of the number of people in the district. It can therefore not be used to show that one district is worse off than another on average. Commonly districts with large populations have high poverty gaps. This does not mean that the people in such a district are particularly poor. It might just mean that there are many people in the district who are all slightly below the poverty line. A district with a smaller population might have a lower poverty gap, but each individual might be much further below the poverty line. For this reason, the figures on the map are supplemented by per capita poverty gaps. These are calculated by dividing the annual poverty gap by the number of people in a district" (Erasmus: DBSA).

Districts with a per capita poverty gap of over R500 are located in the southern and south-eastern parts of the Northern Cape province. Williston is the worst off district with a per capita poverty gap of R601. Other districts with a per capita poverty gap of over R500 are Sutherland (R570), Hanover (R541), Philipstown (R538), Fraserburg (R521), Richmond (R519), and Carnarvon, Kenhardt, and Colesberg (R508).

The best off districts are in the northern, north-eastern and western parts of the Northern Cape. To the north, Postmasburg (R272), Gordonia (R333) and Kuruman (R338) have low per capita poverty gaps. Kimberley (R261) in the north-east has the lowest per capita poverty gap of the province. To the west, Namaqualand (R319) has a low per capita poverty gap.

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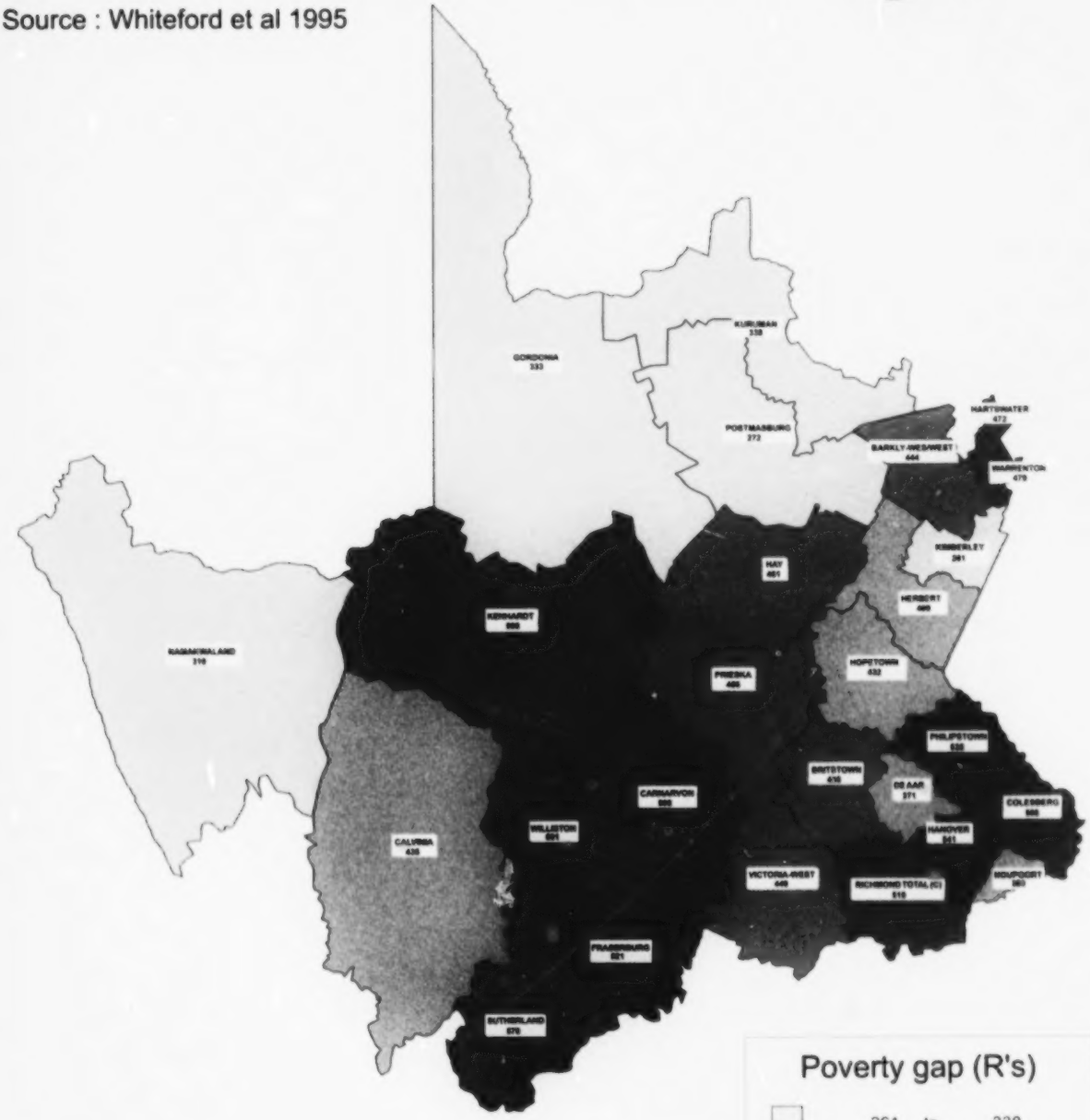
GIS Unit
Human Sciences Research Council

MAP 4 : POVERTY GAP PER CAPITA

HSRC
RGN
GIS UNIT

Source : Whiteford et al 1995



Poverty gap (R's)

261	to	338
338	to	435
435	to	461
461	to	519
519	to	601

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Table 4: Poverty gap

DISTRICT	TOTAL POPULATION	POVERTY GAP (R1000)	PER CAPITA POVERTY GAP (R)
Barkly West	35 012	15 558	444
Britstown	6 523	2 968	455
Calvinia	18 430	8 026	435
Carnarvon	9 728	4 939	508
Colesberg	15 446	7 850	508
De Aar	25 438	9 425	371
Fraserburg	4 367	2 275	521
Gordonia	118 623	39 504	333
Hanover	4399	2 382	541
Hartswater	29 146	13 762	472
Hay	11 104	5 121	461
Herbert	26 316	10 758	409
Hopetown	11 175	4 825	432
Kenhardt	11 353	5 765	508
Kimberley	167 060	43 562	261
Kuruman	24 817	8 382	338
Namaqualand	62 536	19 959	319
Noupoort	8 348	3 200	383
Philipstown	8 799	4 738	538
Postmasburg	54 790	14 921	272
Prieska	19 185	8 746	456
Richmond (C)	6 326	3 283	519
Sutherland	3 596	2 048	570
Victoria West	11 910	5 347	449
Warrenton	22 368	10 719	479
Williston	4 177	2 511	601

6.5 Dependency ratio

The dependency ratio reflects the number of people supported by a single person in the age group 15 to 64 years old. In South Africa the dependency ratio is 1,9 persons. The map shows the dependency ratio for the Northern Cape to be 1,6 which is lower than most other provinces. Unemployment and underemployment impact on dependency. People in the labour force, regardless of whether they are employed or not, have to support members of the family or extended family.

Dependency ratios should be evaluated together with the unemployment rate, as the dependency ratio does not take unemployment into account. The dependency ratio is a better indication of the age composition of the population rather than a true dependency indicator. If the dependency ratio was formulated on the basis of the number of persons supported by the employed population the results would be different. According to the definition pensioners are dependants, but in many instances pensioners support households on their meagre pensions.

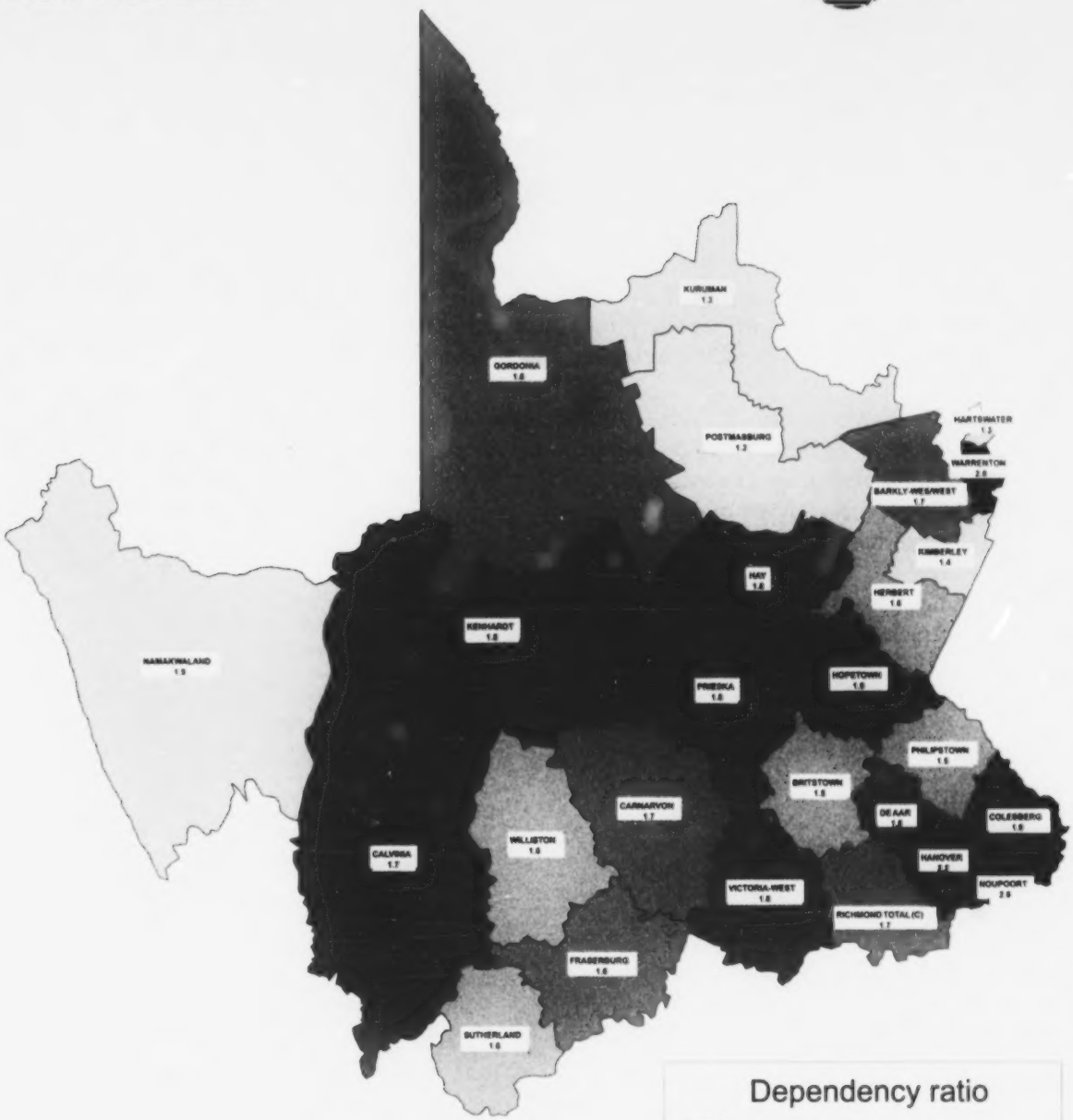
In many Karoo towns, as in many other settlements in the province, there is a high dependency on state allowances and pensions. The figures for Calvinia illustrate this: From a population of approximately 7 000, 1 083 people (approximately 15% of the population) receive state allowances, mostly as old age pensions and disability grants. Many family members and relatives are also dependent on this income.

J. Sadick
Department of Economic Affairs and Tourism

MAP 5 : DEPENDENCY RATIO

HSRC
RGN
GIS UNIT

Source : 1991 Census



Dependency ratio

- 1,2 to 1,5
- 1,5 to 1,6
- 1,6 to 1,7
- 1,7 to 1,8
- 1,8 to 2,6

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Table 5: Dependency ratio

DISTRICT	TOTAL POPULATION	ECONOMICALLY ACTIVE POPULATION	DEPENDENCY RATIO
Barkly West	35 012	12 678	1,76
Britstown	6 523	2 555	1,55
Calvinia	18 430	6 660	1,76
Carnarvon	9 728	3 588	1,71
Colesberg	15 446	5 213	1,96
De Aar	25 438	8 796	1,89
Fraserburg	4 367	1 624	1,68
Gordonia	118 623	44 066	1,69
Hanover	4 399	1 370	2,21
Hartswater	29 146	12 682	1,29
Hay	11 104	3 889	1,85
Herbert	26 316	9 845	1,67
Hopetown	11 175	3 771	1,96
Kenhardt	11 353	3 981	1,85
Kimberley	167 060	67 562	1,47
Kuruman	24 817	10 616	1,33
Namaqualand	62 536	25 018	1,50
Noupoort	8 348	2 287	2,65
Philipstown	8 799	3 475	1,53
Postmasburg	54 790	24 291	1,25
Prieska	19 185	6 831	1,80
Richmond (C)	6 326	2 288	1,76
Sutherland	3 596	1 375	1,61
Victoria West	11 910	4 159	1,86
Warrenton	22 368	7 404	2,02
Williston	4 177	1 565	1,66

6.6 Population density

The map shows that the Northern Cape has the lowest population density of all the provinces. The four districts with the highest number of people per km² are Hartswater (40), Warrenton (14), Kimberley (47) and De Aar (8). These exceed the average for the region of nearly 2 people per km² in 1991. The high densities can mainly be attributed to the relatively small sizes of these four districts coupled with intensive agricultural activities around Hartswater, Warrenton and Kimberley, as well as the mining activities in the Kimberley area. The high population density at De Aar is the result of its being a relatively small district and a major railway junction in South Africa.

The low population densities are found in the south and south-western areas of the region (Kenhardt, Calvinia, Williston, Sutherland and Fraserburg). Although these districts are relatively large, which contributes to the low densities, their economy is agriculturally based (stock farming) and the carrying capacity of land in terms of stock farming seems to be very low in these regions.

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and
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MAP 6 : POPULATION DENSITY

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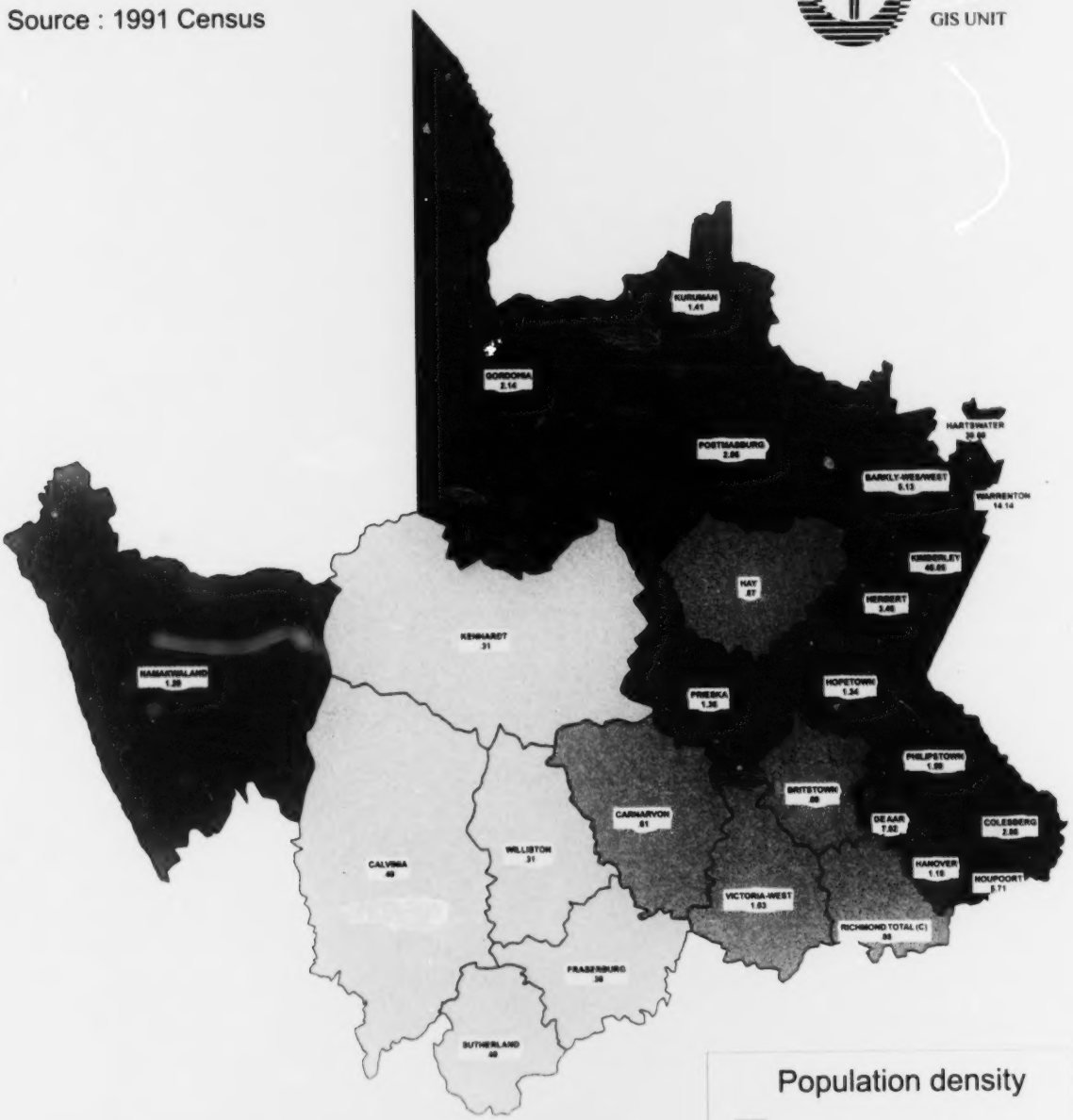
Source : 1991 Census



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Population density

	,31 to ,49
	,49 to 1,03
	1,03 to 1,41
	1,41 to 5,13
	5,13 to 46,85

Table 6: Population density

DISTRICT	TOTAL POPULATION	AREA	POPULATION DENSITY
Barkly West	35 012	6 824	5,13
Britstown	6 523	7 320	0,89
Calvinia	18 430	37 730	0,49
Carnarvon	9 728	15 937	0,61
Colesberg	15 446	5 369	2,88
De Aar	25 438	3 211	7,92
Fraserburg	4 367	11 588	0,38
Gordonia	118 623	55 520	2,14
Hanover	4 399	3 699	1,19
Hartswater	29 146	736	39,60
Hay	11 104	12 820	0,87
Herbert	26 316	7 600	3,46
Hopetown	11 175	8 322	1,34
Kenhardt	11 353	37 048	0,31
Kimberley	167 060	3 566	46,85
Kuruman	24 817	17 563	1,41
Namaqualand	62 536	48 347	1,29
Noupoort	8 348	1 463	5,71
Philipstown	8 799	5 525	1,59
Postmasburg	54 790	19 233	2,85
Prieska	19 185	14 148	1,36
Richmond (C)	6 326	7 203	0,88
Sutherland	3 596	8 937	0,40
Victoria West	11 910	11 536	1,03
Warrenton	22 368	1 582	14,14
Williston	4 177	13 372	0,31

6.7 Index of Need

As outlined in Section 4,2, high index scores are indicators of underdevelopment. The social variables selected to develop the Needs Index were the poverty gap, pupil:teacher ratio, dependency ratio, total households, and population density. A district not requiring development intervention based on this Social Needs Index would have a low index score and the following social profile: a low poverty gap, low pupil:teacher ratio, low dependency ratio, low population densities and a high number of households. Conversely an underdeveloped district would have a high poverty gap, high pupil:teacher ratio, high dependency ratio, high population densities and a low number of households.

The map of the Index of Need suggests that there is a variation in the socio-economic status between the west and the east of the province. The worst off district is Warrenton (77) in the east of the province, just north of Kimberley. Although Kimberley is the capital and the industrial and commercial centre of the province, it has only an average socio-economic level. This is typical of the eastern part of the province where socio-economic conditions vary from average to poor. De Aar, Hanover, Colesberg and Noupoort in the south-east are also socio-economically underdeveloped.

The southern districts of Carnavon, Williston, Fraserberg and Sutherland form a socio-economically well-off cluster. The main features of the low index scores in this cluster are a low poverty gap, low pupil:teacher ratios and low population densities.

MAP 7 : INDEX OF NEED

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UNDERDEVELOPED AREAS
HAVE HIGHER
INDEX SCORES

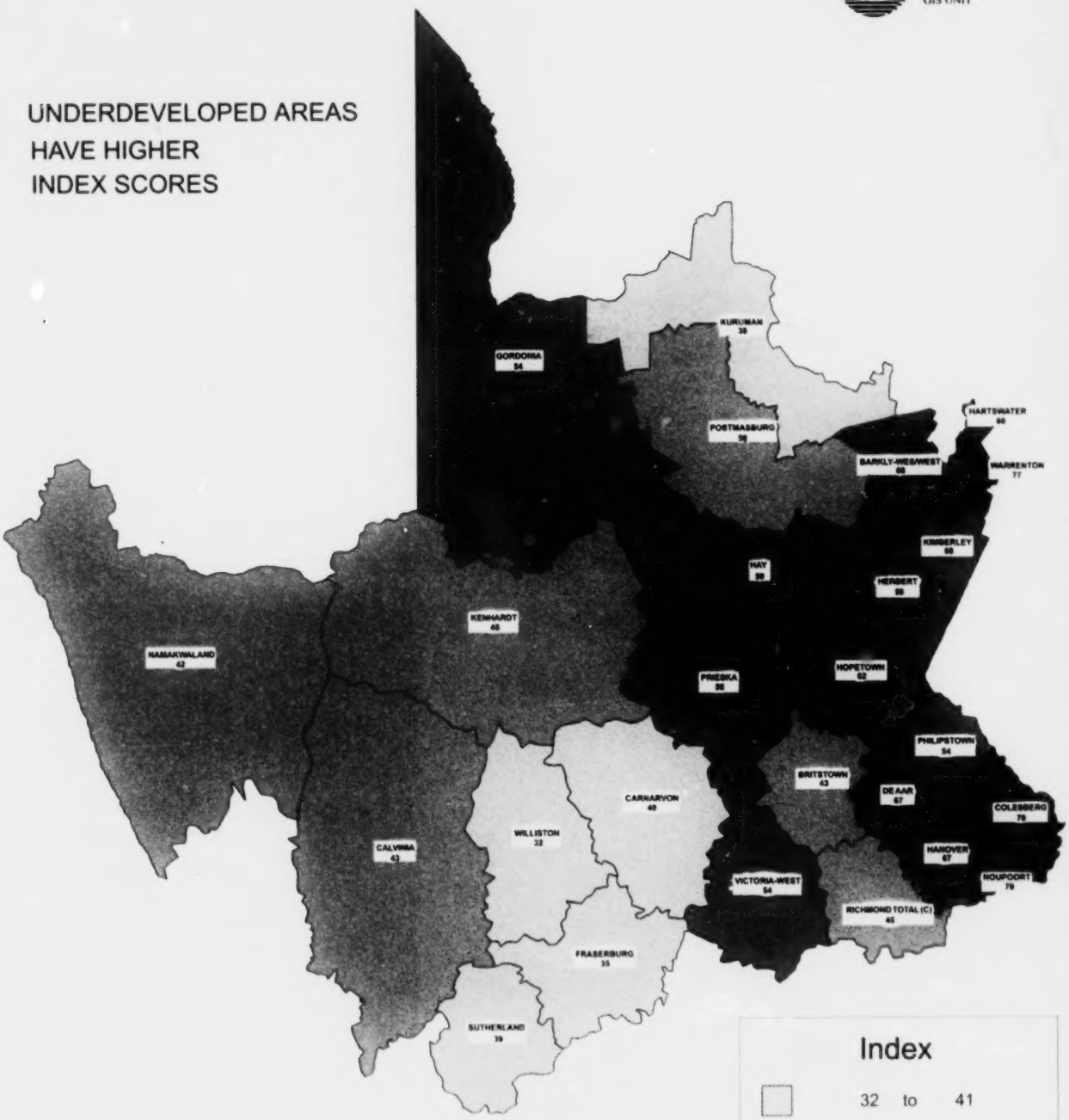

Table 7: Index of Need

DISTRICT	SOCIAL INDEX
Warrenton	77
Noupoort	70
Colesberg	70
Barkly West	68
Hanover	67
De Aar	67
Hopetown	62
Hartswater	60
Herbert	59
Hay	59
Prieska	58
Kimberley	58
Gordonia	54
Victoria West	54
Philipstown	54
Postmasburg	50
Kenhardt	45
Richmond (C)	45
Britstown	43
Calvinia	43
Namaqualand	42
Carnarvon	40
Kuruman	39
Sutherland	39
Fraserburg	35
Williston	32

7

PROVISION OF SERVICES IN THE NORTHERN CAPE

7.1 Education

Introduction

"South Africa's pattern of school organisation, governance and funding, which is a legacy of the apartheid system, must be transformed in accordance with democratic values and practice, and the requirements of the Constitution" (Education White Paper 2, 1996:1). The constitution establishes a democratic national, provincial and local government order. All governments and public schools are to observe fundamental rights and protect fundamental freedoms, many of which have direct implications for decisions made by school governors and managements. The constitution also obliges governments to negotiate with school governing bodies before changing their rights, powers and functions. They are also to fund all public schools on an equitable basis in order to achieve an acceptable level of education.

The White Paper "Education and Training in a Democratic South Africa: First Steps to Develop a New System", approved by cabinet in February 1995, described the process of investigation and consultation that would be followed by the Ministry of Education in order to bring a new pattern of school organisation into existence. For this purpose, a representative review committee was announced. "The Review Committee's brief was to recommend to the Minister of Education a proposed national framework of school organisation and ownership, and norms and standards of school governance and funding which, in the view of the committee, are likely to command the widest possible public support, accord with the requirements of the Constitution, improve the quality and effectiveness of schools, and be financially sustainable from public funds" (Education White Paper 2, 1996:1).

Principles underlying a new framework

"The new structure of school organisation should create the conditions for developing a coherent, integrated, flexible national system which advances redress, the equitable use of public resources, an improvement in educational quality across the system, democratic governance, and school-based decision-making within provincial guidelines. The new structure must be brought about through a well-managed process of negotiated change, based on the understanding that each public school should embody a partnership between the provincial education authorities and a local community. The new structure of the school system must address the inheritance of inequality and ensure an equitable, efficient, qualitatively sound and financially sustainable system for all its learners" (Education White Paper 2, 1996:5).

"The huge disparities among South African schools require a new structure of school organisation - a system of governance which will be workable as well as transformative. Both organisational structure and governance must be adequately uniform and coherent, but flexible enough to take into account the wide range of

school contexts, the significant contrasts in the material conditions of South African schools, the availability or absence of management skills, parents' experience or inexperience in school governance, and the physical distance of many parents from their children's schools. The South African population has a right to expect that a redesigned school system for a democratic South Africa will be manifestly new, more equitable, and empowering to all who have a direct stake in the success of schooling" (Education White Paper 2, 1996:6).

As a guide to negotiated change in the school system, the Ministry of Education therefore proposes that the new structure of school organisation, governance and funding must aim to

- "ensure both national coherence and the promotion of a sense of national common purpose in the public school system, while retaining flexibility and protecting diversity;
- enable a disciplined and purposeful school environment to be established, dedicated to a visible and measurable improvement in the quality of the learning process and learning outcomes throughout the system;
- enable representatives of the main stakeholders of the school to take responsibility for school governance, within a framework of regulation and support by the provincial education authorities;
- ensure that the involvement of government authorities in school governance is at the minimum required for legal accountability, and is based on participative management;
- enable school governing bodies to determine the mission and character or ethos of their schools, within the framework of Constitutional provisions affecting schools, and national and provincial school law;
- ensure that the decision-making authority assigned to school governing bodies is coupled with the allocation of an equitable share of public (budgetary) resources, and the right to raise additional resources, for them to manage;
- recognise that a governing body's right of decision-making is not linked to the ability of its community to raise resources;
- ensure both equity and redress in funding from public (budgetary) resources, in order to achieve a fair distribution of public funds and the elimination of backlogs caused by past unequal treatment;
- improve efficiency in school education through the optimum use of public financial (budgetary) allocations, and publicly-funded staff resources" (Education White Paper 2, 1996:6).

Application of the principles underlying the ministry's approach to school organisation, governance and funding will be a very complex matter. This is because any solution to the inheritance of injustice in the schools will be difficult to apply and will take time to work through the system. "Therefore, it is all the more important that policy goals be clearly stated on the basis of defensible principles, so that they may properly guide the practical decisions that will be required in the course of drawing up legislation, in the process of negotiation with school governing bodies and teachers' organisations, and in the development of administrative arrangements to implement the new system" (Education White Paper 2, 1996:6).

The organisation of schools

The policy of the Ministry of Education is that there shall be just two broad categories of schools in future: public schools and independent schools.

Public schools comprise community schools, farm schools, state schools, and state-aided schools (including church schools, Model C schools, mine schools, and others). Collectively, these comprise just over 98% of the country's primary and secondary schools, and almost 99% of school enrolments (Education White Paper 2, 1996).

Public schools will have the following features in common:

- "Each public school will represent a partnership between the provincial education department and the local community;
- Public schools will be funded from public resources, that is, from provincial education department budgets, and with few exceptions their property will be owned by the state;
- The admission policies of public schools will be determined by governing bodies in consultation with provincial education departments, in terms of national norms and provincial regulations, and will uphold constitutionally guaranteed rights and freedoms;
- The mission policy, and character or ethos of each public school will be determined within national and provincial frameworks by a governing body comprising elected representatives of the main stakeholders of the school;
- The salaries of teachers in each public school will be paid by the provincial education department according to a staff provisioning scale, and such teachers will be appointed in each public school by the provincial education department on the recommendation of and in consultation with the school's governing body" (Education White Paper 2, 1996:8).

"Independent schools comprise private or independent schools. Together, these account for not quite 2% of primary and secondary schools, and about 1,2% of enrolments. The Ministry of Education's policy is that schools presently known as private schools will henceforth be known as independent schools. The independent schools sector is very small, but it is important and appears to be growing. Independent schools are privately owned schools that appoint their own teachers. All independent schools should be required by law to register with the provincial education department and to comply with the conditions of registration laid down by the province. Such regulation of independent schools through a registration process under provincial government law is consistent with international practice" (Education White Paper 2, 1996:9).

Governance in schools

"Governance policy for public schools is based on the core values of democracy. Governing bodies will have substantial decision-making powers, selected from a menu of powers according to their capacity. Teachers in public schools will be employed by the provincial education departments on the recommendation of and in

consultation with governing bodies. The intention is that all public schools will be granted a legal personality in recognition of the responsibilities of their governing bodies. Governing bodies in all schools need to make suitable arrangements to meet their responsibilities to learners with special education needs" (Education White Paper 2, 1996:9).

Schools in the independent sector have been established as educational trusts. They must comply with educational laws and regulations and register with provincial education departments. Conditions of registration should include approval of the school constitution, which should include provisions for governance. The ministry will support provincial legislation or other measures to encourage private school owners, directors or trustees to introduce representative governing body or consultative arrangements in their own schools, where they have not already done so.

The financing of schools

"The Review Committee proposed a new financial system for public schools based on a partnership between the government and communities, on the basis that nothing else is affordable under present conditions. In terms of these proposals, provincial budgets would be restructured to secure fundamental constitutional requirements and policy objectives. School operating costs would be funded partly by subsidy, and partly by income-related school fees which would be obligatory for all parents who could afford them. Poor parents would not pay fees, and no child would be refused admission to school. The same system would apply in the compulsory and post-compulsory phases, with a reduced per capita subsidy in the post-compulsory phase. The system should be reviewed after five years" (Education White Paper 2, 1996:19).

Meanwhile, progress has been made on three important measures relating to school finance.

- "A single learner:educator ratio. A single ratio on which provincial staff provision scales can be based must underlie an equitable school financing system. On 29 September 1995, the Education Labour Relations Council (ELRC) signed an agreement on guideline learner-educator ratios of 40:1 in ordinary primary schools and 35:1 in ordinary secondary schools. These ratios do not stipulate exact class sizes, but provide parameters within which each provincial bargaining chamber will negotiate staff provisioning scales for its schools. This is a major step towards equity in the provision of educators to all schools. Separate agreements will be negotiated for other institutions including special schools and technical schools.
- An Education Management Information System (EMIS). A steering committee was established by the Department of Education to oversee the development of an EMIS. The committee comprises representatives of the national and provincial departments of education, the organised teaching profession, and a number of NGO and academic research units. By providing information to all ten departments of education, the new EMIS will support budgetary and personnel planning for 1996/97.
- A School Index of Needs. The index is required as a planning tool for departments of education. It will be compiled on the basis of a census of all 29 000 schools in the country, and will supplement the data gathered for the EMIS. The index will enable provincial departments, their regional and district offices, and school

communities to make more informed and equitable decisions about financial allocations to schools, expenditure on redress and quality improvement" (Education White Paper 2, 1996:24).

7.1.1 Pupil : teacher ratios

According to the October Household Survey 1994, there were 196 919 persons (65%) between the ages of 5 and 24 years attending schools, colleges, universities and technikons. Of these an estimated 189 800 scholars were enrolled at 387 primary schools, 28% at 89 secondary schools and 8% at combined schools (Department of Education, 1994). The pupil:teacher ratio was within accepted standards of 1:35 for primary school pupils and 1:32 for secondary school pupils. The ratios at Northern Cape primary schools were 1:28 and 1:22 at secondary schools. There was no shortage of teachers on a provincial level. However, there was a shortage of teachers mostly in rural farm schools and some schools in Kimberley. Furthermore, the farm schools and some state schools also had teachers with less than Level B qualifications. Repetition rates for all schools were not available, but average repetition rates for primary scholars were 18% and 16% for secondary scholars. However, the range spread from 0 to 67%. The high repetition rates do not correlate with inadequate pupil:teacher ratios, nor with urban as opposed to rural schools. Besides the fact that all schools with high rates were public or state schools, no other correlating factor was identified.

The Population Development Programme indicated that nearly one in ten children of school-going age was not attending school in 1991. Hopefully this situation has been relieved with the new education policies. Increases in enrolment at all types of schools increased by an average of almost 5% (10 000 pupils) from 1993 to 1994 (Department of Education). According to the 1994 Household Survey, the urban areas had higher levels of school attendance than the rural areas, for example 92% of urban blacks attended school while only 73% of their rural counterparts did. Of the 35 986 coloured persons (16 to 24 years) who had not yet attained Standard 10 and who were not scholars, 63% did not want to continue their studies, while 24% indicated that they lacked the necessary funds to complete school. Thirty-five per cent of the blacks indicated that they could not continue school for lack of funds.

Problems in education were described by communities as being: lack of facilities, pupil:teacher ratios; corruption; no parent involvement; limited subject choice; no after-school care; unavailability of bursaries; conditions on farm schools; absence of technical and agricultural schools and colleges; lack of motivation and commitment, and drinking among teachers. Many of these problems were also cited by others.

Suggestions that have emerged include the need for more co-operation between parents, teachers and pupils; the need to revise the syllabus; the creation of technical and agricultural schools and colleges; that education should be geared to the needs of the community; the establishment of bursary funds and the need for skills education.

MAP 8 : AFRICAN PUPILS PER TEACHER

Source : 1991 Census

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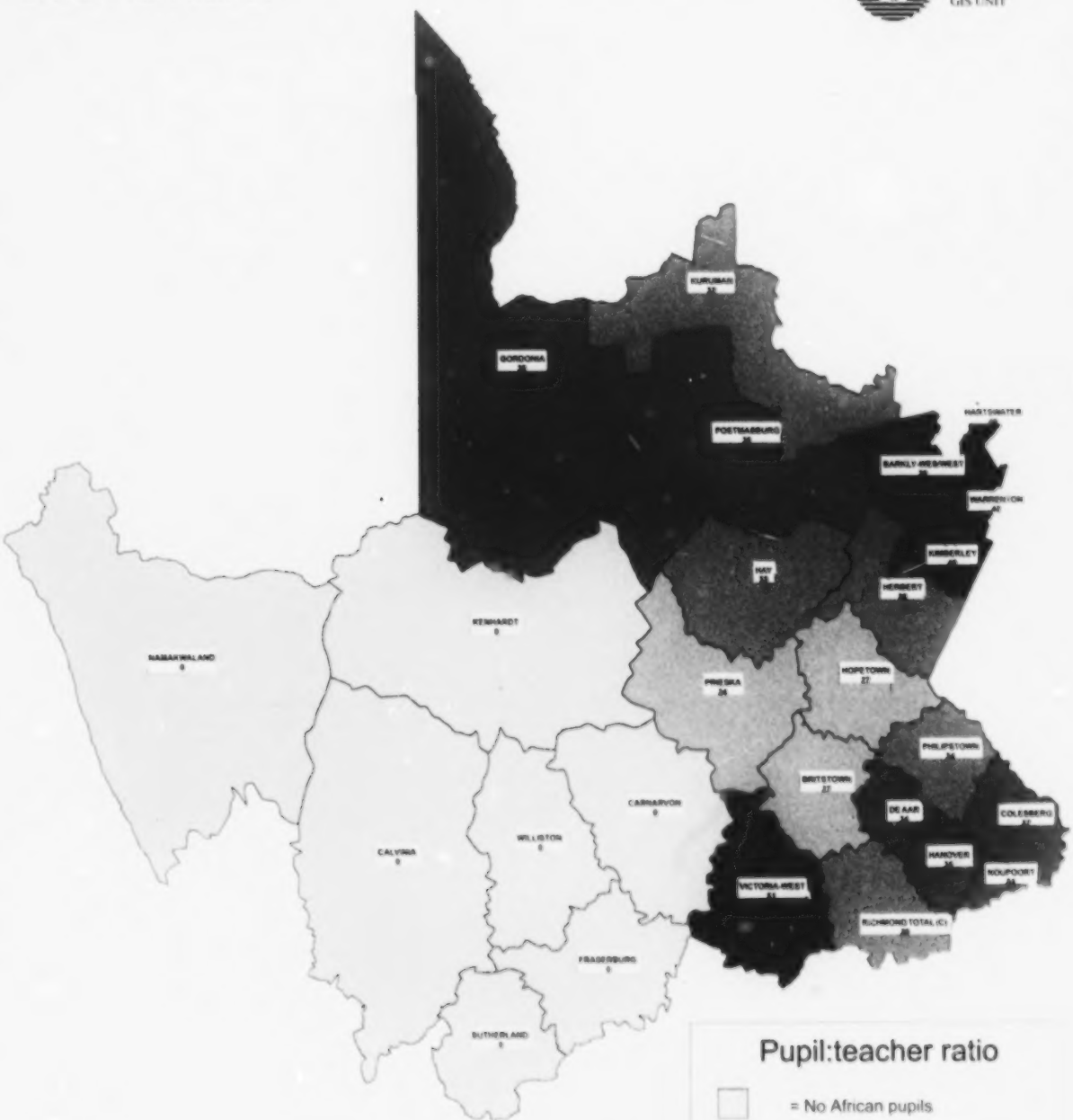

Pupil:teacher ratio

- = No African pupils
- 0 to 27
- 27 to 34
- 34 to 38
- 38 to 51

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Table 8 Total African pupils per teacher

DISTRICT	AFRICAN PUPIL	TEACHERS	AFRICAN PUPIL/TEACHER RATIO
Barkly West	4 127	105	39
Britstown	215	8	27
Calvinia	0	0	0
Carnarvon	0	0	0
Colesberg	3 119	85	37
De Aar	2 144	63	34
Fraserburg	0	0	0
Gordonia	1 950	51	38
Hanover	667	19	35
Hartswater	3 125	64	49
Hay	332	10	33
Herbert	1 225	41	30
Hopetown	218	8	27
Kenhardt	0	0	0
Kimberley	20 426	515	40
Kuruman	414	13	32
Namaqualand	0	0	0
Noupoort	1 198	35	34
Philipstown	741	22	34
Postmasburg	3 656	95	38
Prieska	193	8	24
Richmond (C)	320	11	29
Sutherland	0	0	0
Victoria West	409	8	51
Warrenton	4 015	96	42
Williston	0	0	0

7.1.2 Adult literacy

Education and training

According to Cole Consulting and Setplan (1995), the Northern Cape suffered from a lack of skilled manpower. Of particular importance was the need to restructure the curriculum towards employment opportunities and to focus on skills training for employment and self-employment. The improvement of the efficiency of the education and training systems and the qualitative upliftment of education and training systems needed attention. They recommended that a reciprocal accreditation system within the National Qualifications Framework be introduced.

Adult basic education and training

Cole Consulting and Setplan (1995) found that various organisations were involved in Adult Basic Education and Training (ABET) projects in the province with funding assistance from donor organisations. These programmes aimed to empower adults who had not had the opportunity to attend school to play a more effective role in the social and economic development of the province.

There were at that time no state training programmes for training trainers of ABET. The Department of Education and Training was to co-operate with NGOs providing training and tertiary institutions to prepare ABET practitioners for the requirements of the National Qualifications Framework.

A provincial task team of 10 members was at the time drafting a policy for the Northern Cape and preparing a stakeholders' list to enable all interested parties (employers, NGOs etc.) to be involved.

Suggestions to improve access to training included increased mobility of training personnel from existing institutions to satellite facilities in the rural areas and the utilisation of available infrastructure. The introduction of community colleges would play a large role in human resources development as these colleges would target out-of-school youth, dropout students and some employed people. Their focus would be to provide functional skills. Because of the geographical nature of the province, it was intended that a college be located in each subregion. Financing of the colleges would possibly come from the state, trusts and the private sector. The province was to investigate a pilot project. (Cole Consulting and Setplan, 1995).

MAP 9 : PERCENTAGE ADULTS BETWEEN 15 AND 64 YEARS WITH STANDARD 6 OR HIGHER EDUCATION

Source : CSS, District Census 1991

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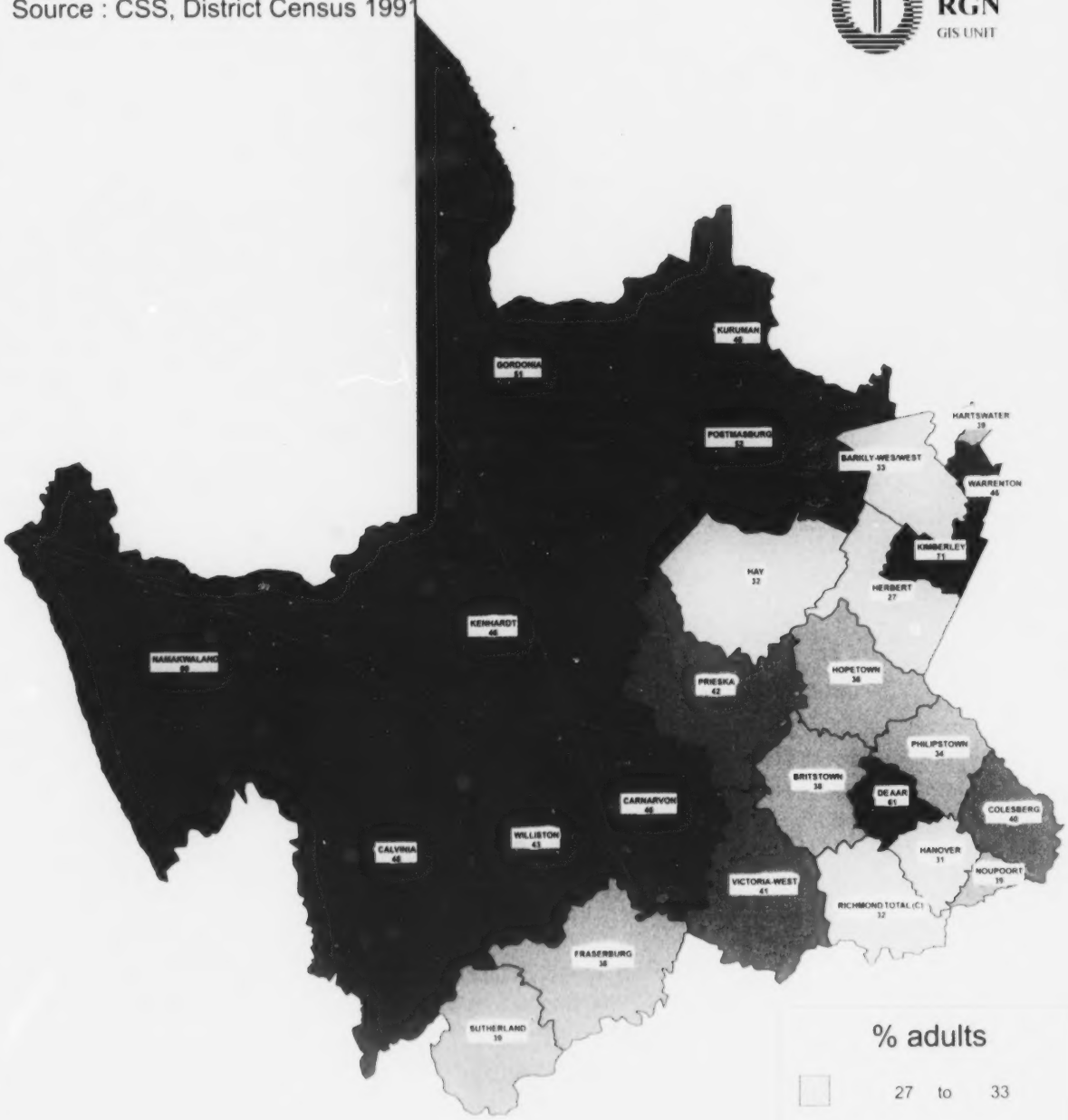

% adults

	27	to	33
	33	to	39
	39	to	42
	42	to	48
	48	to	71

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Table 9 Percentage adults between 15 and 64 years with Standard 6 or higher education

DISTRICT	TOTAL ADULTS (15 - 64 YRS)	ADULTS (15 - 64 YRS) WITH SECONDARY ED.	ADULTS (15 - 64 YRS) WITH TERTIARY ED.	% ADULTS (15 - 64 YRS) WITH STD 6 OR HIGHER ED.
Barkly West	20 852	6 481	455	33
Britstown	3 708	1 239	167	38
Calvinia	10 929	4 546	711	48
Carnarvon	5 847	2 391	308	46
Colesberg	8 684	3 163	351	40
De Aar	15 330	8 662	694	61
Fraserburg	2 691	824	186	38
Gordonia	71 445	33 009	3 209	51
Hanover	2 384	633	98	31
Hartswater	17 706	6 019	804	39
Hay	6 129	1 711	235	32
Herbert	14 956	3 597	498	27
Hopetown	6 238	2 052	288	38
Kenhardt	6 623	2 685	333	46
Kimberley	108 302	70 276	6 507	71
Kuruman	15 423	6 549	908	48
Namaqualand	39 245	21 717	1 824	60
Noupoort	4 222	1 503	139	39
Philipstown	4 885	1 409	252	34
Postmasburg	35 548	16 771	1 867	52
Prieska	11 320	4 290	506	42
Richmond (C)	3 538	936	194	32
Sutherland	2 197	701	165	39
Victoria West	6 877	2 446	388	41
Walvisbaai/Bay	17 168	10 555	810	66
Warrenton	13 231	5 732	328	46
Williston	2 485	871	194	43

7.1.3 Pre-school education

Introduction

Pre-school education is important in the Northern Cape, especially when parents are at work and children have to be taken care of at these facilities. A large number of children attend such facilities.

Function

Educare facilities serve different functions in different areas of the Northern Cape. "In reasonably well-off suburbs pre-primary schools have mainly an educational function, broadening the social experience of children from nuclear families and providing educational experiences that make the transition to primary school easier. In less affluent urban and peri-urban areas, educare facilities serve primarily as day-care centres for the children of working mothers, and vary considerably in the quality of the care from conscientious and high-quality care to the frankly exploitative.

"In rural areas the needs are different again. Day-care diminishes in importance where families are extended, but the creches provide a base for the distribution of food supplements, and for development experience for both children and adults. Through large rural educare networks such as those organised by TREE (Training and Resources in Early Education), children and their parents are introduced to educational ideas. Adult activities often include the generation of funds to support and extend the creche facilities. These activities may lead into joint ventures for the acquisition of new skills such as literacy classes and basic bookkeeping" (Kvalsvig 1995:57).

Survival rates, failure and dropout rates in the junior primary phases

"The educational implications of the context in which the black child develops are largely negative. Owing to inadequate nutrition and health care the child's physical condition is often poor, thus limiting energy and vitality. The child also lacks the experiences necessary for optimal cognitive development. Language development in turn is negatively affected. The result is a child who is not school ready and is therefore unable to keep up with the pace at school. This leads to school failure and early dropout.

"While there are disturbing data illustrating the plight of African children in South Africa, the educational implications of this context are most explicitly manifested in the high failure and dropout rates for black primary school children and the number of children who leave school without gaining functional literacy" (Atmore, 1996:3).

A number of factors contribute to the high failure and dropout rates. Lategan (1990:3) writes: "Some of these factors relate to conditions internal to the education system (such as access to schools, teacher:pupil ratios, teacher qualifications, etc.) and some to socio-economic conditions external to the education system (such as the education and income levels of their families)."

The provision of pre-school educare services before school entry, among other

strategies, is necessary as a means of combating primary school dropout and failure.

Forms of service provision

Different educare facilities operate according to their different programmes, for example play groups, creches, and pre-schools.

Play group
A play group operates for about three hours a day and does not need to have blankets and matrasses as the time the children spend at such a facility is of short duration.

Creche
A creche is where children from 0-6 are cared for while parents are at work. Meals are prepared for the children, and the children are also allowed time to rest, play and learn.

Pre-school
Children of 3-6 are admitted to and looked after at a pre-school. They are divided into age groups and those that are ready to go to school are thus prepared. Pre-school children also receive cooked meals as well as time to rest. Those that are school ready are, however, not allowed to sleep as they are being prepared for the following year (Keswa: Northern Cape Educare Trust).

Pre-school children

Pre-school children from birth to six years of age are particularly vulnerable. There are approximately 9 947 000 children up to the age of nine years who are in need of early childhood development services.

"Children under the age of six are particularly vulnerable and in need of such services. They constitute 13% of the total South African population. Two-thirds live in rural areas. African children make up 83%, coloured children 7,3%, white children 7,6% and Indian children 1,9% of the total number of children in this age group. About 60% of children of pre-school age live in impoverished circumstances. Of these, 90% are Africans who live in poorly resourced rural areas" (White Paper for Social Welfare, 1996).

Children from disadvantaged families are in particular need of early childhood development services. At present approximately only one in ten pre-school children are in early childhood development programmes. There is a lack of services for the age group from birth to three years old and for disabled children.

There is no acceptable set of minimum standards for the provision of services to pre-school children. Some programmes are inadequately resourced, thus the quality of care is consequently impoverished (White Paper for Social Welfare, 1996).

The first six years

"The first six years of life are of vital importance in the development of the young child. During these years the foundation is laid for the child's development. It is a period of the most intense physical and intellectual development. Development is also more rapid than during any other period of life and deprivation has lasting effects. Recognition of the importance of these early years and the benefits of access to programmes coupled with changes in the patterns of employment of women have resulted in the development of early childhood programmes and facilities throughout the world.

"Early childhood development is an umbrella term used for the processes by which children grow from birth and develop physically, mentally, emotionally and socially. A variety of programmes provides opportunities for young children to develop fully and are aimed at giving the young child the best possible preparation for the future.

"The foundation of a child's ability to learn and succeed in life is laid during this phase. It is the result of appropriate care that addresses the mental, physical, social and emotional needs of the child. Interventions that provide such care and help strengthen the contexts in which children live, including strengthening the family, the community, and the physical, social and economic environment are necessary for children living in difficult circumstances.

"Investment in early childhood development has been shown to modify inequalities rooted in poverty and social discrimination by giving children from disadvantaged backgrounds a fair start in school and life. Effective early childhood development programmes can bring about cost savings in areas other than education. Health care costs can be cut through preventive measures found in programmes that help reduce disease and accidents. The social costs of delinquency, adolescent pregnancy and related problems are cut as children stay in school longer; and absenteeism is reduced when parents, assured of proper care of their children, can devote time to their jobs. The links between community development and early childhood development programmes through the empowerment and skills acquisition of parents and community members are well known. In early childhood, children are responsive to learning the values of mutual respect and tolerance essential for a democratic society and it is the best place to begin to develop a culture of learning" (Atmore, 1996:2).

Problems encountered

A large number of children do not attend creches; the reasons for this vary: sometimes it is because the parents are unemployed and cannot afford the fees, sometimes one finds that the distance between the child's home and the nearest centre is vast necessitating transport and again the parents cannot afford to pay transportation costs (Keswa: Northern Cape Educare Trust).

Access to early childhood development (ECD) services is very limited with just over one in ten children having access to services of any kind. Such access as there is, is in inverse proportion to need: white children have significantly greater access to services than black children; children in poverty-stricken rural areas have fewer ECD services than children in urban areas, children on farms being worst off; middle-class children

benefit from more highly subsidised pre-primary education programmes, while working-class children often attend full-day centres that do not have the funds to provide an adequate service. Educare programmes focus on the 3-6 age group and there is a general neglect of under-threes who are in a particularly vulnerable period of life. The needs of children with disabilities are largely unprovided for (Atmore, 1996).

Goals and objectives of pre-school educare

The general goal of pre-school educare is defined as being "to enrich the lives of individual children whose development would otherwise be adversely affected by detrimental socio-economic and cultural circumstances, and to show parents and communities how, besides giving love and devotion, they can best help their children to be successful in school and, ultimately, in their adult lives. As an ideal, community-based early childhood education programmes offer the hope that ignorance, poverty and disease can be reduced and the promise that even the most disadvantaged child can be helped to lead a fulfilling and worthwhile life. Thus, early childhood education, especially in developing countries, is much more than an end in itself. It is also a means for social development and improvement" (Atmore, 1996:4).

The objectives of pre-school educare lie in the growth and development of children in four main areas: the cognitive, social, emotional and physical.

Guidelines for strategies

The following guidelines are set out in the White Paper for Social Welfare:

Pre-school and school-going children

- Children from birth to nine years of age have special needs which will be met to foster their physical, mental, emotional, moral and social development.

- A national early childhood development strategy will be devised as part of an intersectoral programme in collaboration with other government departments, civil society and the private sector. A combination of public and private financing options will be harnessed. At national and provincial levels, interesectoral committees will be initiated to co-ordinate and implement such a strategy.

- The Department of Welfare will ensure that conditions are created for the optimum development of all children and their families through the rendering of appropriate early childhood development services. These services are preventative in nature and constitute a social investment in a healthy and able nation.

- Disadvantaged children under five years of age will be the primary target for early childhood development services as they are the least served at present and the most vulnerable group. The needs of children in the age group birth to three years old and of disabled children will also be addressed urgently.

- "No single model or programme is appropriate to meet the varied early childhood development needs of families, and a range of options will be made available,

such as home and centre-based services; after-care for school-going children; stimulation programmes including part-day programmes; and family, education, health and nutrition programmes. Early childhood development facilities are particularly well placed to house supplementary feeding programmes, which are more effective when combined with nutritional education" (White Paper for Social Welfare, 1996).

- "Services and training programmes offered by existing role-players - government, local authorities, non-governmental organisations (NGOs), community-based organisations (CBOs) and parents - will be reinforced. Through community development interventions, early childhood development services will be initiated in underserviced areas " (White Paper for Social Welfare, 1996).

- Training will be developed for all those engaged in early childhood development service delivery and all care givers, parents and social service professionals. Use will be made of formal and non-formal training services, and all training will be integrated into the National Qualifications Framework for accreditation by the South African Qualifications Authority (SAQA).

- Early childhood development programmes will be registered, and appropriate national standards developed, which will be flexible and therefore applicable to a wide range of circumstances.

- After-school child development programmes for school-going children will be promoted.

Policy guidelines for needs in rural areas

- There are no policy guidelines in place at present.
- It is proposed that the clustering of farms and rural villages within a radius of 100 km into one central ECD and ABET centre will be introduced.
- Policy guidelines/ECDs and ABET centres will be developed and secured.
- Transport to pick up the children from outlying points and transport them to the central centre will be introduced (Siyoko, personal communication, 1996).

Future needs

The building of educare centres should be considered as most existing centres operate from shacks, churches and even community halls in some instances. These structures are sometimes regarded as unsafe and unhealthy. Community halls are used for other functions during weekends and in the week as creches again. During the local government elections the children were greatly inconvenienced as they had to vacate the creche whenever the hall was needed for a meeting (Keswa: Northern Cape Educare Trust).

The feeding schemes at most centres has also been stopped. This has further curtailed attendance at creches as the children are now required to bring their own food from home.

Training of educare workers must also receive attention as the children have to be taught and prepared for school.

Issues important in meeting future needs

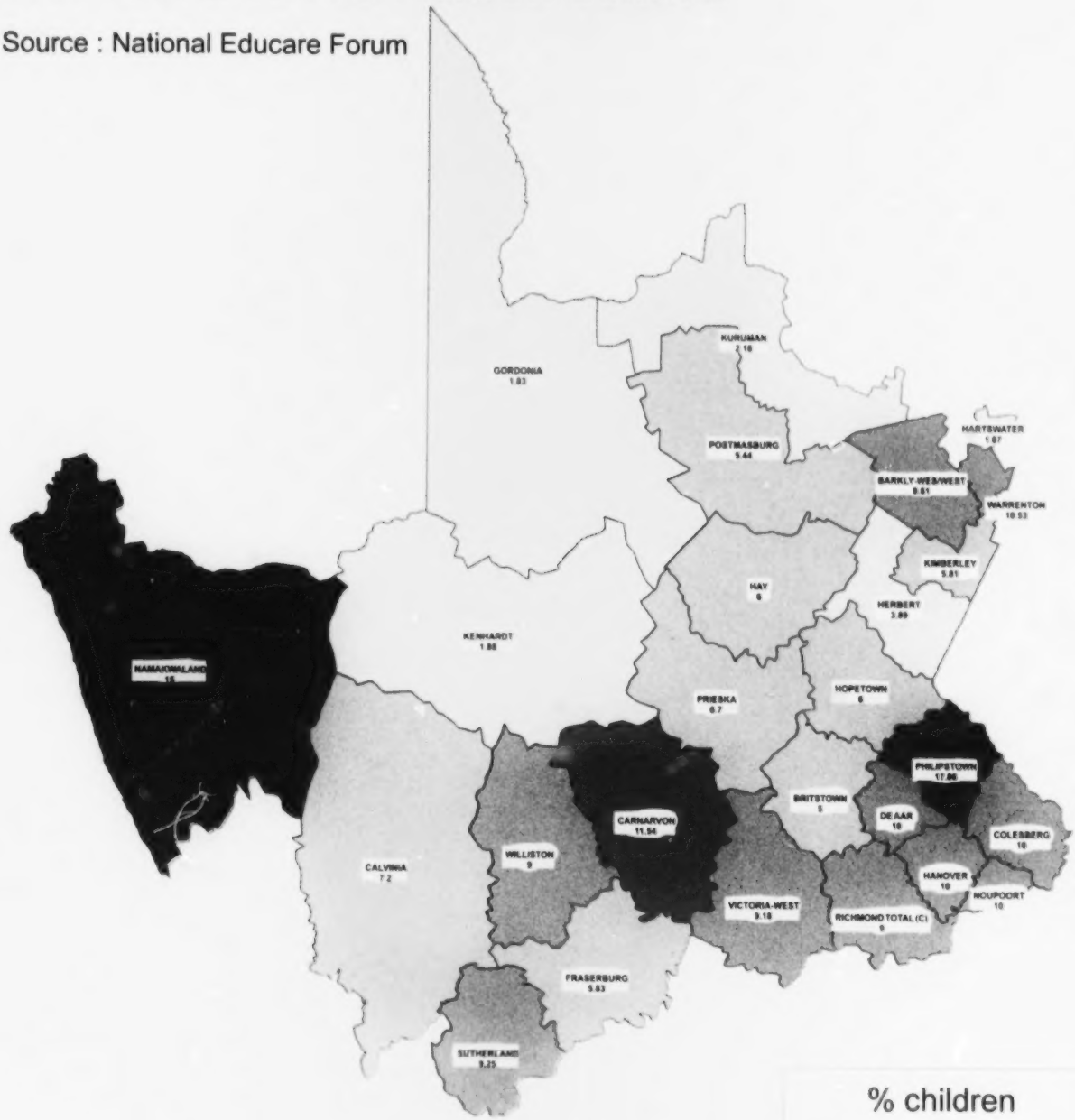
- Making ECD (pre-primary education) compulsory especially the reception year
- Funding the reception year in NGO and private ECD centres
- Drawing up policy guidelines for opening an ECD centre
- Training for all ECD practitioners involved with the reception year (5-6 years old)
- Training ECD governing bodies in management and utilisation of funds

(Siyoko, personal communication, 1996).

M.L. Keswa
Northern Cape Educare Trust

MAP 10 : PERCENTAGE CHILDREN YOUNGER THAN 6 YEARS IN EDUCARE OR PRE-PRIMARY SCHOOL

Source : National Educare Forum



% children

1,67 to	4,90
4,90 to	8,14
8,14 to	11,38
11,38 to	14,62
14,62 to	17,86

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Table 10 Percentage children younger than 6 years in educare or pre-primary school

DISTRICT	EDUCARE CENTRES	CHILDREN (0-5) AT CENTRES	TOTAL AGED 0 - 5	% TOTAL CHILDREN AT CENTRES
Barkly West	7	490	5 100	9,61
Britstown	1	50	1 000	5,00
Calvinia	2	180	2 500	7,20
Carnarvon	3	150	1 300	11,54
Colesberg	regional average	regional average	2 400	10,00
De Aar	regional average	regional average	4 900	10,00
Fraserburg	2	35	600	5,83
Gordonia	10	291	15 900	1,83
Hanover	26	1 967	regional average	10,00
Hartswater	1	70	4 200	1,67
Hay	regional average	regional average	1 800	6,00
Herbert	4	171	4 400	3,89
Hopetown	regional average	regional average	1 800	6,00
Kenhardt	1	30	1 600	1,88
Kimberley	20	1 127	19 400	5,81
Kuruman	1	80	3 700	2,16
Namaqualand	regional average	regional average	7 800	15,00
Noupoort	regional average	regional average	1 400	10,00
Philipstown	3	250	1 400	17,86
Postmasburg	10	392	7 200	5,44
Prieska	6	181	2 700	6,70
Richmond (C)	regional average	regional average	regional average	9,00
Sutherland	1	37	400	9,25
Victoria West	3	156	1 700	9,18
Warrenton	8	337	3 200	10,53
Williston	1	45	500	9,00

7.2 Health

Introduction

The sections dealing with problems and challenges, restructuring, policy framework, principles, and district health system are abridged from the policy document "Restructuring the National Health System for Universal Primary Health Care 1996".

"Health care delivery in South Africa faces a number of acute problems and challenges, many of which are related to the utilisation and distribution of financial and other resources. Approximately R30 billion was spent on health care in South Africa in 1992/93. This is equivalent to 8,5 % of gross domestic product (GDP), or one-twelfth of the economy. South Africa is thus devoting substantially more resources to the health sector than most developing countries, yet has poor health status relative to these countries" (Restructuring the National Health System for Universal Primary Health Care, 1996:1).

Problems and challenges confronting the public health sector

One of the most pressing problems facing public health services is the heavy concentration of resources in the hospital sector, and consequent underresourcing of primary health care services. "Approximately 76% of total public sector health care expenditure was attributable to acute hospitals in 1992/93, with academic and other tertiary hospitals alone accounting for 44%. In contrast, 11% was spent on non-hospital primary care services. While certain hospitals provide quite substantial primary care services (e.g. deliveries, and ambulatory care at community hospital outpatient departments), it is clear that a redistribution of resources between levels of care is required if the government is to significantly improve access to community-based primary care services for those who currently do not have such access" (Restructuring the National Health System for Universal Primary Health Care, 1996:2).

The effectiveness of public sector health services is also undermined by the historical geographic maldistribution of resources that are the legacy of the apartheid health care system. An explicit process of resource reallocation between the nine provinces has been implemented with effect from the 1995/96 financial year. "The stated goal is to achieve per capita equity in provincial health care allocations, with an allowance for provinces with academic complexes, within 5 years. While attention is usually focused on the distribution of resources between provinces, recent data has highlighted significant intraprovincial disparities in public sector resource allocation. These indicate that the public sector in the richest magisterial districts employs 4,5 times more general doctors, 2,4 times more registered nurses, and 6,1 times more health inspectors than in the poorest districts, and that average public expenditure per person on health services in the richest districts is 3,6 times more than in the poorest districts" (Restructuring the National Health System for Universal Primary Health Care, 1996:3).

The inequitable and inefficient distribution of public sector health care resources has contributed to inadequate public health sector performance over the last several decades. This is manifest in extremely poor health indicators, including high rates of

avoidable morbidity, disability and mortality among the poor and disadvantaged communities, particularly in rural or urban underserved areas. These problems will be significantly addressed through improvements in quality and accessibility of the public primary health care delivery system.

In summary, the public sector faces the challenge of attempting to improve access to basic primary care services for those who currently do not have access to such care. It is at the same time trying to redress historical inequities in the distribution of health care resources between and within provinces. This must be achieved within the constraints of a limited budget that is currently derived mainly from general tax revenues (Restructuring the National Health System for Universal Primary Health Care, 1996:3).

Problems and challenges confronting the private health sector

"Over the past decade, expenditure in the private sector, particular that by medical schemes, has increased more rapidly than the rate of inflation, with expenditure on medicines and private hospitals increasing rapidly during this period. The rise in expenditure on benefits is due to increases in both unit costs and utilisation levels. Several factors have driven these increases, including the fee-for-service reimbursement of providers, the fact that some doctors have a stake in the financial performance of hospitals through share ownership, as well as the fact that many health service providers (including hospitals and medical practitioners) benefit financially from selling medicines. Cost increases have also been driven by increases in the proportion of scheme members who are elderly. As expected, the level of contributions to medical schemes has also risen rapidly, since schemes must finance the benefit payments out of contributions" (Restructuring the National Health System for Universal Primary Health Care, 1996:3).

"Recent changes to the legislation governing medical schemes, (the Medical Schemes Amendment Act of 1993) have improved the capacity of schemes to manage their costs to some extent. However, previous changes to the legislation (specifically, the 1989 amendments to the Act), have created a situation in which the cross-subsidisation of elderly members by younger, healthier members is undermined, in that medical schemes are now permitted to charge high risk members higher contributions, based on their previous medical claims or on pre-existing conditions. Certain schemes are thus becoming increasingly unaffordable for the elderly and chronically ill who will rely more heavily on public sector health services.

"The rapid cost spiral and fragmentation of risk pools within medical schemes is of concern to a number of health sector stakeholders. Medical scheme membership is becoming increasingly unaffordable for many South Africans, and especially those with low incomes, the elderly and those with chronic illnesses. In the absence of a substantial cost-containment effort, scheme membership may begin to decline significantly, and expansion of the medical scheme market to low income earners is unlikely to occur. This will have negative consequences for the public health sector, through increasing numbers of medical scheme members becoming dependent on public sector services for their health care. It is recognised that recent trends towards the emergence of managed care arrangements may go some way towards alleviating cost pressures in the private health insurance market. However, additional regulatory

measures are considered essential in order to address the full range of inefficiencies now pertaining in that market" (Restructuring the National Health System for Universal Primary Health Care, 1996:4).

Need for restructuring of the national health system

The serious problems in both the public and private sectors, and in the interface between them, will become increasingly serious as the burden on the health services increases over time due to the rapidly expanding HIV/AIDS epidemic, and to the ageing of the population and other epidemiological shifts inherent in the epidemiological transition being experienced by the country.

Addressing these problems effectively will require a significant level of restructuring of both sectors and of their interactions. Some elements of this restructuring can be undertaken in the short term, while other elements will take at least five to ten years to implement. Particular priorities in this restructuring process include the following:

- Efforts to restrict the growth of health sector expenditure in South Africa by focusing on the more efficient and effective use of existing resources
- Improving the access of South Africans to health services, as well as the quality of services, particularly at the primary care level and in geographic areas that are currently underresourced
- Promoting the redistribution of resources between levels of care within the public sector
- Achieving a redistribution of resources currently used only in the private sector to make them accessible to a broader section of the population
- Promoting cost-containment efforts within the private sector

(Restructuring the National Health System for Universal Primary Health Care, 1996).

Policy framework for the national health system

This policy document contains a set of policies that will involve a comprehensive restructuring of health care in South Africa, aimed at the development of a comprehensive, efficient and equitable national health system. More specifically the policies aim to achieve

- substantial, visible and sustainable improvements to the accessibility, efficiency and effectiveness of a publicly funded primary health care (PHC) service;
- improvements in the funding, efficiency and governance of the public hospital system; and
- improvements in the equity and efficiency of the private health sector, and in the interaction between the public and private health care systems (Restructuring the National Health System for Universal Primary Health Care, 1996).

Principles of the PHC delivery system

- The National Health System should ensure universal access (the ease with which health services may be accessed geographically, financially and socially).
- The National Health System should build on and strengthen the existing public sector PHC and hospital system.

- The National Health System should be congruent with, and should strengthen the emerging district-based health care system.
- The National Health System should be based on a comprehensive primary health care approach, and should use population-based planning and delivery mechanisms.
- The PHC delivery system should be fully integrated with, and consistent with, other levels of the National Health System.
- The National Health System should optimise the public-private mix in health care provision, and should ensure the achievement of the redistribution of resources between the private and public sectors.
- The National Health System should preserve the choice of individuals to use private providers and to insure themselves for doing so.
- The National Health System should emphasise the needs and rights of users of the system, and should empower users and their communities to participate in governance of the health care system.
- The National Health System should be outcome driven, and should place substantial emphasis on quality of patient care, on health outcomes, and on the "caring" aspects of health care services.
- The organisation and functioning of the National Health System should be based on the principle of decentralised management, which will aim to create the maximum possible management autonomy at health facility level within the framework of national public service guidelines. (Restructuring the National Health System for Universal Primary Health Care, 1996).

The district health system

"The South African Government of National Unity, through its adoption of the Reconstruction and Development Programme (RDP) in 1994, committed itself to the development of a District Health System based on the Primary Health Care Approach as enunciated at Alma Ata in 1978. This approach is the philosophy behind which many health systems around the world have been reformed, and out of which has developed the concept of the District Health System. District-based health services are now applied successfully in many countries, and have been adapted to a wide variety of situations, from developing countries on our own continent, to more sophisticated systems such as that of Canada" (Restructuring the National Health System for Universal Primary Health Care, 1996: Appendix 2, p.1).

A national health system based on this approach is as concerned with keeping people healthy as it is with caring for them when they become unwell. These concepts of "caring" and "wellness" are promoted most effectively and efficiently by creating small management units of the health system, adapted to cater for local needs. These units provide the framework for our district-based health system, so that a district health authority can take responsibility for the health of the population in its area (Restructuring the National Health System for Universal Primary Health Care, 1996).

Primary health care (PHC) services are at present provided in a fragmented and inefficient manner. Co-ordination between the public and private sectors is minimal, and within the public sector there has been a multitude of different (and overlapping) authorities responsible for health services. Salaries, and terms and conditions of service vary greatly between different local authorities, and between local authorities

and the provincial and national administrations.

Restructuring district level health services will be a complex process, but failure to do so will perpetuate inefficiency and inequity. An integrated health system is built on the provision of health and health care services at the community level, because central to the PHC approach is full community participation in the planning, provision, control and monitoring of services.

Comprehensive PHC activities encompass all that is required to make a difference to people's lives: to make them healthy, and to advocate for the conditions that will keep them healthy. This is the "wellness" approach to health systems. It recognises that our health is determined by factors that go beyond the traditional definition of health and health care. There are social and other determinants such as housing, water, sanitation, education, employment, income, the environment, and individual lifestyle that all play major roles in determining our health. This means that a health service based on wellness should, *inter alia*,

- be structured so that appropriate emphasis is placed on prevention, health education and promotion, early intervention, and rehabilitation;
- be responsive to community needs by placing control and management responsibilities at a local level;
- eliminate inequities and establish intersectoral development links;
- integrate institutional, community-based and preventive programmes both within the health sector and with other sectors impacting on health;
- reduce waste and eliminate duplication at all levels (Restructuring the National Health System for Universal Primary Health Care, 1996).

The system must be structured so that no one in need is prevented from accessing any of the levels of care that they may require, rapidly and efficiently, and so that all will receive the highest quality of care at all levels.

"The district level is the level at which co-ordination of all district health services takes place, and is the unit of management of the health system that is best able to drive it. The district must be large enough to be economically efficient, but small enough to ensure effective management which is accountable to local communities and is responsive to local needs through the participation of communities and of staff in the planning and management of services" (Restructuring the National Health System for Universal Primary Health Care, 1996: Appendix 2, p.2).

7.2.1 Average population per hospital bed

Health and welfare status in the Northern Cape

A person's health and especially his eating affect his ability to work and his quality of life. Hunger and disease reduce a person's ability to earn an income and escape the poverty cycle.

The available data show that all forms of tuberculosis are a scourge in the Western and Northern Cape with 459 cases of pulmonary tuberculosis per 100 000 persons

reported in the last year in Northern Cape. The incidence of tuberculosis (TB) and measles is relatively high. Especially TB is endemic in areas characterised by poor socio-economic conditions and relatively few mobile clinics for the large rural areas.

Asbestosis related to the asbestos mining industry is not a notifiable disease and therefore the rates of occurrence are unknown. The incidence of AIDS and HIV is also difficult to determine as these are not notifiable diseases.

Measles, which could reflect inadequate immunisation facilities, was prominent in the Northern Cape and Free State. The De Aar and Hay districts are higher than the provincial average with 409 and 128 cases per 100 000 persons being reported. Eighty-eight per cent of people affected by measles in the De Aar district were older than two years. An immunisation campaign was carried out in response to this incidence.

Twenty per cent of births in 1994 were to teenagers in the Northern Cape with the districts of Barkly West (31%), Colesberg (31%), Warrenton (39%) and Williston (41%) experiencing high rates.

Immunisation rates vary, but low rates are found in Kuruman, Hartswater, Fraserburg and Herbert. Districts showing low anthropometric results (children below the standard weight and height per age) were Kenhardt (14%), Barkly West (11%) and De Aar (8%).

According to the Department of Health the average infant mortality rate of the country is 41,8 of 1 000 live births, while the Northern Cape rate is 48,5. Infant mortality reflects the inadequacy of prenatal and neonatal care. The district rates range from 0 to 109 infant deaths per 1 000 births, with particularly high rates occurring in Hanover, Gordonia and Kenhardt. This mortality rate decreased from 55,6 per 1 000 births in 1993 to 48,5 per 1 000 births in 1994. The child mortality rate also decreased from 12,6 to 6,5 per 1 000 during the same period. Life expectancy, in contrast, is influenced not only by health facilities, but also by nutrition, socio-political violence and other living conditions. The average life expectancy figures for the provinces do not differ greatly, with most discrepancies occurring between urban and rural groups within provinces.

Free health services were introduced to all clinics, hospitals and for all district surgeons in July 1994. The Department of Health and Welfare reported that although all services experienced increases in attendance, there was no improvement in the number of post-natal visits and the percentage of low birth weight babies has increased.

It must be noted that averages often do not highlight the disparities within communities nor between the rural and urban areas of the province. Health data are gathered from clinic attendance and therefore capture information concerning only those who attend clinics (Cole Consulting and Setplan, 1995).

The Northern Cape is faced with unique circumstances, namely a small population, vast distances, and poor economies of scale that make global norms inappropriate. The present formula used by the Fiscal and Finance Commission to determine allocations is a population-based formula that results in a small allocation to this

province. Little consideration is given to that fact that the Northern Cape comprises more than 30% of the surface area of the country and has an extremely low population density which poses serious logistical and financial problems in providing access to health services (Premlin Pillay, personal communication).

Human resources development in the Northern Cape

The health of communities often depends on the level of awareness of good health practices. The primary health care movement has contributed to the increased level of health awareness. Schools have been a focal point for expanding awareness through campaigns on major health issues such as TB and AIDS and health education, focusing on food, sanitation and water, is offered at schools. Health shows are organised in the larger settlements such as Douglas by the RSC and Department of Health. Community participation, especially on the education programmes, is sought although some authorities have reported a lack of finance for health.

According to a survey by Cole Consulting and Setplan (1995) the capacity of medical staff was stretched in some districts with district surgeons attending some 1 537 patients per month in Calvinia for instance. High ratios of persons per registered nursing staff were found in the districts of Barkly West, Britstown, Hanover and Herbert.

There is a nursing college to train professional nurses in Kimberley. One hundred and thirty-nine students were enrolled in 1994 and ten students completed their four-year diploma course. The Department of Health also offers a correspondence course in primary health care and all nursing and paramedical staff receive in-service training from the department.

Through the local authorities and RSC's, the Department of Health offers extensive health and health-related support to communities throughout the Northern Cape including health worker training in association with the Rural Foundation, health promotion and awareness, AIDS programmes, feeding schemes and nutritional information, and community development services. These services are offered either from clinics based in towns with municipalities and other rural settlements or from mobile units operating in the more remote areas.

The survey found that while most whites (69%) had access to a medical aid benefit fund, only 10% of the coloureds and 9% of the blacks had fund membership.

A total of 109 554 people were included in the province's nutrition projects funded by the Department of Health (R14,4 million p.a. for the Northern Cape). Feeding schemes were targeted towards children firstly, although the frail and lactating mothers were also included. From 1996 the priority group was to be children below 6 years of age and it was expected that many would have difficulty in accepting the change in policy (Cole Consulting and Setplan, 1995).

Social infrastructure and facilities in the Northern Cape

The map shows that there are 35 provincial and subsidised hospitals in the Northern Cape. Cases that require specialised attention are referred to metropolitan centres such

as Kimberley, Bloemfontein and Cape Town. The De Aar hospital receives patients referred from surrounding districts such as Phillipstown and Hanover where no facilities for in-patient care exist. The mobile service in Jan Kempdorp covers the Warrenton and Hartswater districts. The Hartswater facilities (clinic and hospital) are used by inhabitants of the North West province, and it is estimated that 18% of patients are from outside the Northern Cape. The Kuruman district has a similar problem with 16 to 19% of patients coming from the North West province.

A network of clinics service the municipalities and surrounding districts and mobile clinics service smaller settlements on a weekly or monthly basis. However, some areas receive visits only every six weeks. This may be due to the inaccessibility of outlying areas and, although the mobile service does reach many, a six-weekly service may be inadequate.

The Calvinia district has 739 visiting points and 71 306 km are travelled annually, while Gordonia has 575 points and 145 946 km are travelled. Other districts have fewer visiting points and the distances are less, but this serves to illustrate the limit to which services are stretched to obtain maximum coverage.

The Northern Cape has approximately 86 primary health care clinics, a ratio of 0,76 clinics to 10 000 people, which is similar to the ratio in the Western Cape.

According to Cole Consulting and Setplan (1995), social workers served the towns in the province, but their work was predominantly case work, rather than the provision of social services. Welfare services address problems such as domestic violence, child abuse, alcoholism, but concentrate on treating the symptoms rather than the causes. Comprehensive service provision is difficult, however, without additional personnel, relevant NGOs and an equal distribution of resources.

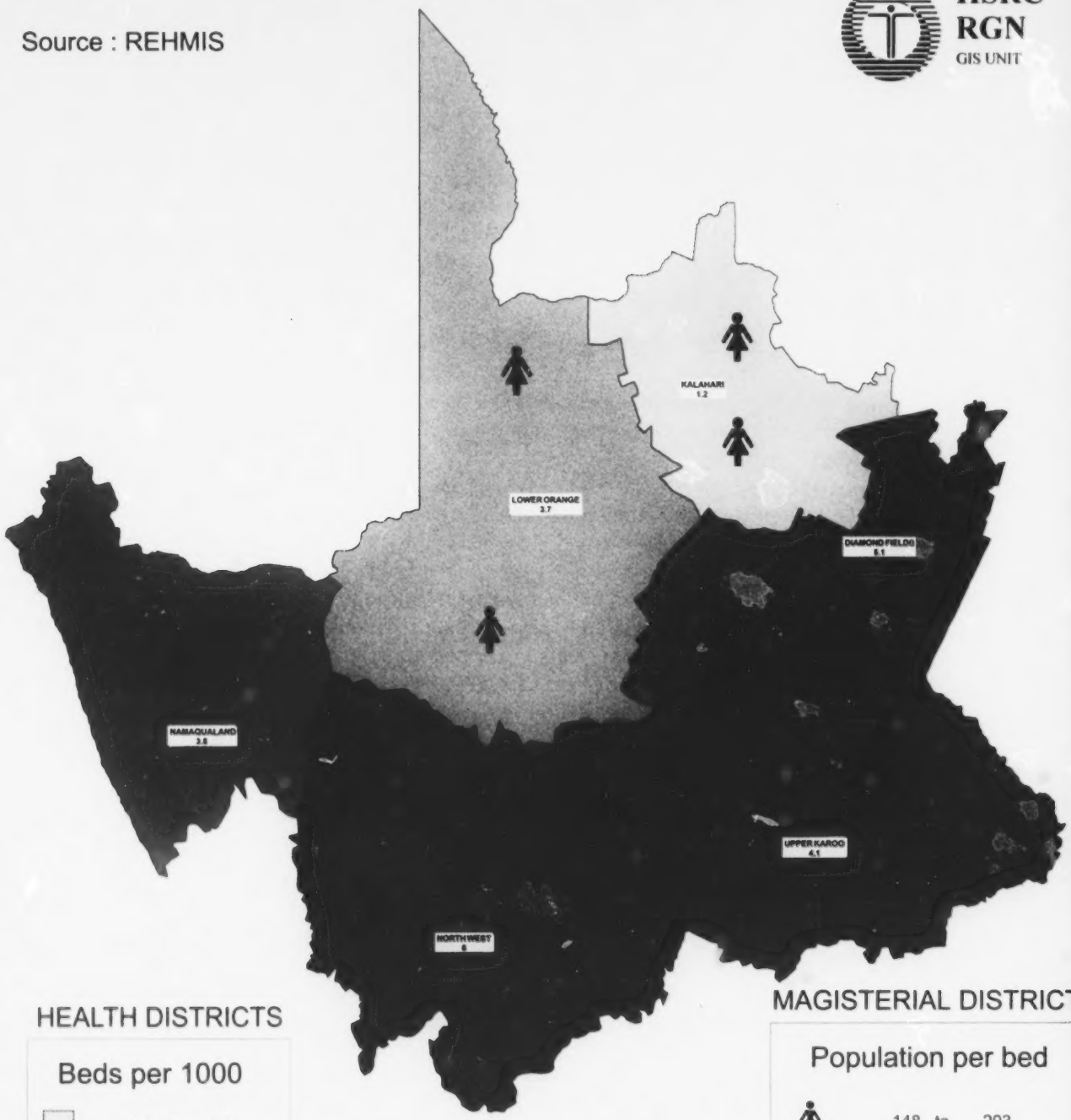
The Health Systems Trust (1996) found that the distribution of beds per 1 000 persons in the province indicated that provision was better in the southern and eastern parts of the province. The North West, Diamond Fields and Upper Karoo have 6,0, 5,1 and 4,1 beds per 1 000 people respectively. Namaqualand and the Lower Orange regions have 3,8 and 3,7, respectively. The Kalahari Region had the lowest number of all with 1,2 beds per 1 000 people.

One of the measures of the efficiency of hospitals is the bed occupancy rate (the proportion of beds occupied in a year). This is usually expressed as a percentage and the optimum level is considered to be 70 to 80%. Occupancy rates below 50% indicate underutilisation and rates over 100% indicate overcrowding. While the Kalahari had a very low ratio of beds to 1 000 people it approached optimum levels of bed occupancy at 64,3%. The Diamond Fields was at optimum bed occupancy rate at 77,5% while the Upper Karoo, North West and Lower Orange approached underutilisation at 58%. Namaqualand was very underutilised at 35,8% (Health Systems Trust, 1996).

MAP 11 : DISTRIBUTION OF HOSPITAL BEDS

Source : REHMIS

HSRC
RGN
GIS UNIT



HEALTH DISTRICTS

Beds per 1000

- 1,2 to 1,2
- 1,2 to 3,7
- 3,7 to 3,8
- 3,8 to 5,1
- 5,1 to 6,0

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MAGISTERIAL DISTRICTS

Population per bed

- 148 to 203
- 203 to 285
- 285 to 486
- 486 to 9 448

Table 11 Distribution of hospital beds

DISTRICT	TOTAL POPULATION	TOTAL NO. OF BEDS	POPULATION / BED
Barkly West	36 593	47	779
Britstown	6 532	2	3 266
Calvinia	21 999	86	256
Carnarvon	9 649	58	166
Colesberg	15 411	76	203
De Aar	26 139	108	242
Fraserburg	4 315	25	173
Gordonia	131 702	339	389
Hanover	5 325	0	n/a
Hartswater	29 334	103	285
Hay	14 010	45	311
Herbert	27 233	56	486
Hopetown	15 412	39	395
Kenhardt	11 300	41	276
Kimberley	174 880	1184	148
Kuruman	25 287	73	346
Namaqualand	78 700	111	709
Noupoort	8 326	50	167
Philipstown	9 448	0	n/a
Postmasburg	60 811	140	434
Prieska	24 890	47	530
Richmond (C)	9 081	38	239
Sutherland	3 529	21	168
Victoria West	13 998	60	233
Warrenton	22 371	46	486
Williston	4 082	27	151

7.3 Housing

Introduction: National housing vision and housing goal

National housing goal

"The estimated housing backlog in South Africa is 1,5 million housing units. If the natural population growth is added to the backlog, a total of 3,5 million housing units will have to be provided over the next ten years" (White Paper, 1994:11).

Owing to the extent of unemployment in South Africa and the associated poverty, approximately 80% of those requiring housing earn less than R3 500 a month and therefore depend on government assistance to obtain a home of their own. Approximately 60% of those in need of housing earn less than R1 500 per month and are totally dependent on government assistance (National Department of Housing, Website, 1996).

"Government's goal is to increase housing's share of the total state budget to 5%. It also intends increasing housing delivery substantially to 350 000 units a year to reach the Government of National Unity's target of 1 000 000 houses in five years" (Annual Report of the Department of Housing, 1995:6).

Housing and the RDP

Housing lies at the core of the Reconstruction and Development Programme (RDP), and South Africa's housing effort must serve as an engine of the economy and as a major spur to job creation.

The general value framework for housing in South Africa complements the RDP's principles and objectives. All the housing and related principles and objectives of the RDP have been incorporated into the White Paper on Housing, which addresses all policy issues regarding housing.

Primarily the RDP aims at redressing past imbalances and distortions. It addresses socio-economic backlogs at scale by providing basic services and infrastructure (including housing), providing employment and maximising employment creation in the process (Annual Report of the Department of Housing, 1995).

The White Paper

The Housing White Paper has provided the basis for all the department's activities. It is the product of extensive consultation involving government at national and provincial level, non-governmental organisations, community representatives and the private sector.

The policy has seven major thrusts designed to turn South Africa's housing situation around:

- **Housing support for a people-driven process**
  "To help individuals and low-income families with housing, government at all

levels, in conjunction with the private sector and civil society, is planning housing support mechanisms throughout the country. The White Paper clearly sets government assistance for the poor as a priority. The poor, however, cannot easily access this assistance entirely on their own. Intervention is necessary to establish a range of financial, institutional, technical and logistical support mechanisms that will enable communities to continually improve their own housing circumstances. Such mechanisms can be organised in the form of housing centres (an identifiable place or base where beneficiary families could gain access to a serviced site and the relevant subsidy package). Where required, they could receive training in materials manufacture and basic construction skills, together with the necessary information and advice to enable them to contribute directly to the design and construction of their own houses or dwellings" (Annual Report of the Department of Housing, 1995:7).

- **Stabilisation of the housing environment**
  "Many communities were in disarray when democracy dawned in South Africa. A lack of functioning local authorities, since the activities of many had been disrupted by rent, bond, and service charge boycotts, meant that even the hitherto limited stream of private sector investment had dried up. The task now is to stabilise the residential environment. Conditions conducive to investment by the public and private sectors and by individuals in these areas must be created" (Annual Report of the Department of Housing, 1995:8).

- **Consolidation and unification of housing institutions**
  "A rationalised statutory, governmental and parastatal institutional framework within which the national housing strategy will be implemented is a priority of government. Fragmentation, overlapping, wastage and inefficiencies in the institutional housing set-up must be eliminated to establish an institutional basis from which a sound long-term strategy can be launched" (Annual Report of the Department of Housing, 1995:10).

- **Encouragement of savings for housing**
  "Individual savings for housing are recognised internationally as a major route towards mobilising housing resources. A positive savings record of more than nine months qualifies a borrower for a home loan. In 1995, a nine-month savings scheme was introduced for those people who cannot afford deposits for minimum housing loans" (Annual Report of the Department of Housing, 1995:10).

- **A subsidy scheme to provide housing opportunities for millions**
  The Housing Subsidy Scheme aims at mobilising credit and is one of the cornerstones of the government's approach to the housing challenge. Its goal is to assist households that cannot provide their own housing.

- **Mobilisation of credit at scale**
  "Virtually none of the nation's savings is currently being invested in low-income housing. Therefore, the majority of the population is practically excluded from access to housing finance. The National Housing Finance Corporation (NHFC) is to address this problem and its task entails removing impediments and reducing the funding costs to small and medium lenders; limiting and spreading the risk associated with lending to low-income borrowers and providing funds for small

retail lenders; reducing interest costs to low-income borrowers; and addressing the regulatory, policy and socio-political constraints on sustained expansion of retail housing credit.

"The NHFC will constitute a long-term intervention aimed at providing structural adjustment within the established financial sector to improve access to finance for those historically denied such access. It will also, however, promote the establishment and growth of innovative alternative retail finance capacity to service market segments in which the more established sector is not yet ready to engage" (Annual Report of the Department of Housing, 1995:13).

- **Making land available for housing**
  "The land delivery process is critical to housing. This includes the identification and allocation of undeveloped land and its transformation into serviced sites for residential development. The fragmented and extremely complex regulatory network within which land is delivered is often inadequate and in conflict with the aims and objectives of the housing strategy and the RDP. Short-term intervention to aid the speedy delivery of land is essential. As a result, the Development Facilitation Act was drafted and promulgated as a short-term measure. This Act makes it possible to lay down nationally uniform norms and standards for land development, offers national legislation in parallel to provincial laws as an alternative, and provides more appropriate mechanisms for transparent, rapid land delivery, an option for provincial administrations, local authorities and the private sector to adopt and utilise. This Act also provides for a Development and Planning Commission to advise the Minister on policy and laws relating to planning, development, land and infrastructure issues" (Annual Report of the Department of Housing, 1995:13).

Obstacles to the housing delivery process in 1995

"The housing sector is coming under fire increasingly for its apparent failure to deliver. Since the first democratic general elections in April 1994, there has been a noticeable slump in housing delivery and this hiatus is causing anxiety and concern. The ongoing policy debate appears to lack decisiveness. Meanwhile, the position among the homeless is deteriorating as people battle for a stake in the dwindling supply of housing opportunities and resources.

"Under the previous dispensation the State's housing functions were fragmented among 17 national and provincial authorities. Without a coherent national housing policy, housing activities were being conducted on an inconsistent and inequitable basis. In the former TBVC states and self-governing territories, authorities paid scant attention to the growing housing needs of their communities, while in the rest of the country the Own Affairs Administrations were extravagant in their allocation of housing subsidies for the benefit of a privileged few. The most the homeless population could hope for was access to a rudimentarily serviced building site without any support in constructing even a basic shelter. Not surprising, therefore, was the size of the housing backlog inherited by the Government of National Unity.

"Government had two options in its approach to the housing problem. It could either follow past practice by entrenching direct State provision as the primary means of

housing the poor - a route that has generally been discredited throughout the world, especially in developing countries - or it could, in line with current international wisdom, adopt an enabling approach which, although results were likely to fall far short of expectations in the short term, would nevertheless offer the best chance of longer-term sustainability. In view of the magnitude of the problem, and the serious limitations on resources, Government was left with little choice but to embark on the onerous exercise of restructuring housing delivery by a process that would draw in all available capacity" (Annual Report of the Department of Housing, 1995:17).

"South Africa is fortunate in having a sophisticated construction industry and an advanced financial sector that have the capacity to meet the effective demand for housing products and services. Nevertheless, the market in which they operate is dysfunctional in that only 15% of households requiring housing are able to meet their needs in the market place without assistance. The remaining 85% depend on State support to a greater or lesser extent. To correct deficiencies in the market, a wide range of interventions to ease the logjam are necessary. These interventions refer to the seven major thrusts designed to improve South Africa's housing situation. Such interventions should be set up coherently and consistently within the framework of a national housing policy and strategy. The national Government's responsibility is therefore to establish a sustainable housing process through interventions that influence the housing market positively" (Annual Report of the Department of Housing, 1995:18).

7.3.1 Distribution of informal housing

Housing is regarded as a right and not a privilege, stressing the government's responsibility in the provision of housing. The lack of adequate housing has been identified as a major problem which is linked to the availability and allocation of land. There is a need for a combined effort by local municipalities, community-based organisations and the private sector to develop a common housing policy. This policy would include rental agreements, land allocation, infrastructure, the provision of services, and maintenance and financing.

The provision of housing along with employment and training opportunities can contribute to the economic activities of the region.

According to Cole Consulting and Setplan (1995), new housing subsidies have been put in place and R2,92 billion is available for housing nationally - an increase of 80% on the previous budget.

Every household earning R3 500 or less per month qualified for a housing subsidy, unless a serviced site as part of state housing assistance had been received in the past. However, if a serviced site had been received, the occupant could qualify for a consolidation subsidy if the monthly household income was R1 500 or less. Bank loans could be obtained along with the subsidy.

Institutional subsidies were offered for:

- co-operative housing: A co-operative is formed to buy or build property and applies for a collective subsidy.

- social housing: An organisation obtains a subsidy to buy or build for the purposes of offering housing at lower rentals to those who qualify for subsidies.

Subsidies were only available for houses costing R65 000 or less. The subsidy was linked to the total monthly income and operated on a sliding scale to the maximum of R15 000. The limit on consolidation subsidies was R7 500. Furthermore, consolidation subsidies were only available on a project-linked basis, that is on the basis of a social compact with the community. The developer applied to the provincial housing board for subsidies.

Cole Consulting and Setplan (1995) reported that the Housing Department of the Northern Cape province was managed by nine officials and the Housing Board had twelve members. The regional Housing Board processed the applications for housing projects in the province.

Problems with the new subsidy scheme related to the variations in the prices of serviced sites in different areas. For the very poor it remained difficult to afford the monthly loan repayments on a house. Communities seeking housing under the subsidy schemes would have to mobilise institutional capacity to engage in housing projects.

Although the government recognised access to housing as a basic right and had provided subsidies to reduce the housing backlog, communities were still expected to pay for housing and services and to respect community facilities. Non-payment of services was no longer acceptable.

Dwellings owned by the authorities were being sold to private persons in Northern Cape towns. For example, in Calvinia all the units had been sold while other towns had recently started this process. The Upington office of the Department of Local Government and Housing had sold 40% of these houses, while in the Kimberley and Springbok areas almost 80% had been sold.

With regard to the survey and registering of properties in towns previously governed by CPA Community Services, black towns, that is 43% of properties had been registered by 1995 and only 7 194 sites remained to be surveyed for registration.

Cole Consulting and Setplan also found that a total of 100 266 serviced sites were permanently occupied in the Northern Cape and that an additional 15 196 serviced sites were not permanently occupied. Towns with large numbers of unoccupied serviced sites were Barkly West (1 159), Hartswater (980), Jan Kempdorp (700), Noupoort (759), Prieska (746), Upington (1 090) and Postmasburg (694). Towns with no unoccupied sites available were Philipstown, Britstown, Griquatown, Hanover, Olifantshoek and Pofadder.

The housing backlog was difficult to determine. A rough estimation of 4,1 persons per household and assuming that each household wishes to live in their own dwelling, showed that a housing stock of 176 000 was needed.

The Northern Cape Department of Housing and Local Government estimated that there was a 45 000 housing unit backlog. The local authorities were encouraged to submit applications for projects to meet the needs of their communities.

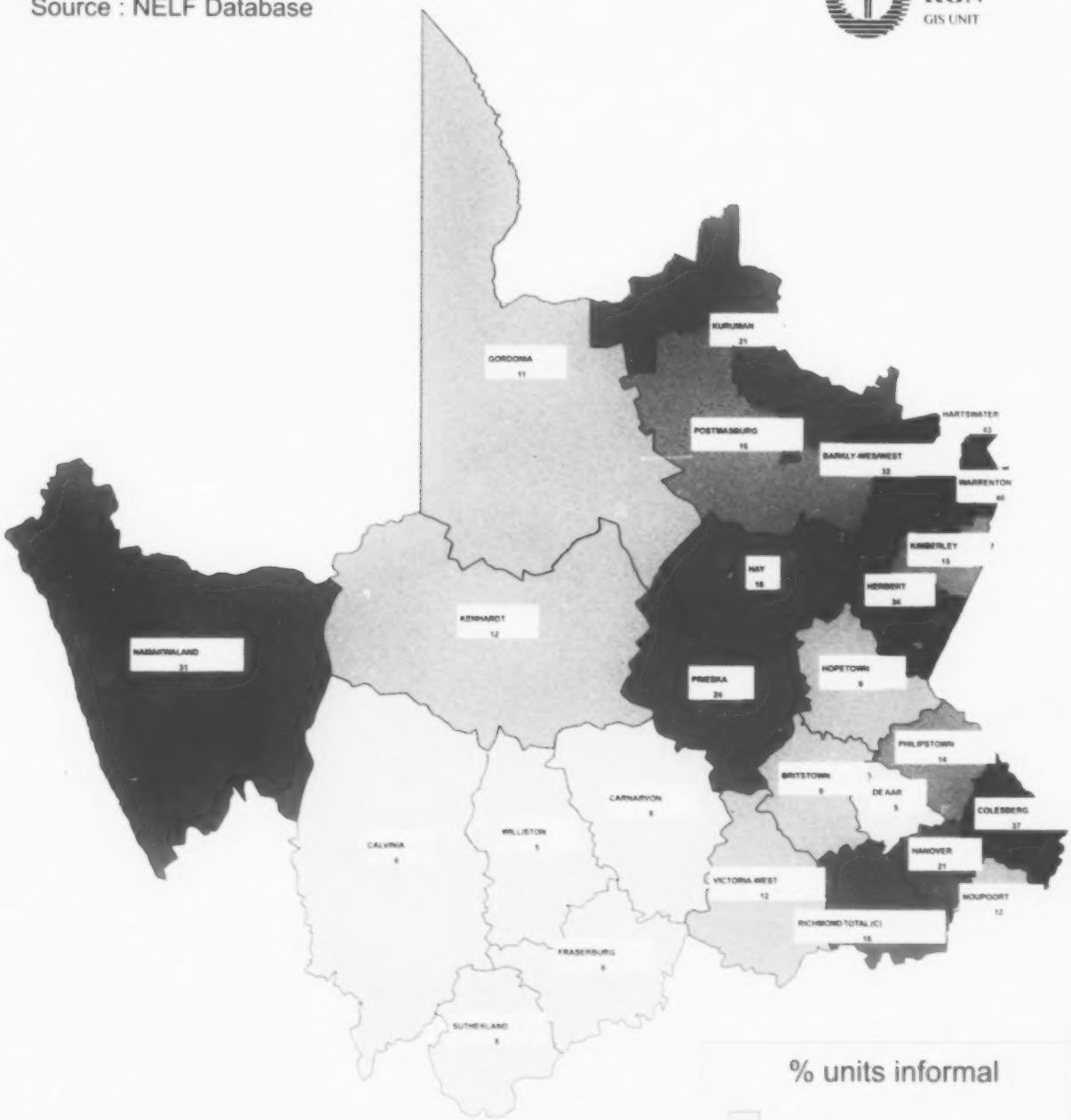
Housing backlogs (more than 1 000) appeared critical in Barkly West (1 060), the Lower Orange district (1 500), Colesberg (1 300), De Aar (1 536), Jan Kempdorp (1 112), Kimberley (23 200), Postmasburg (1 676), Upington (1 036) and Warrenton (2 300). Almost half the backlog was in Kimberley. By 1995 1 273 houses had been completed under the new subsidy scheme.

Cole Consulting and Setplan

MAP 12 : PERCENTAGE INFORMAL HOUSING

HSRC
RGN
GIS UNIT

Source : NELF Database



% units informal

- 5 to 8
- 8 to 12
- 12 to 16
- 16 to 31
- 31 to 43

N

KM

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Table 12 Percentage informal housing

DISTRICTS	TOTAL HOUSES	TOTAL INFORMAL HOUSES	% INFORMAL HOUSES
Barkly West	7 586	2 436	32,1
Britstown	1 601	145	9,1
Calvinia	5 490	316	5,8
Carnarvon	2 568	201	7,8
Colesberg	3 448	1 273	36,9
De Aar	6 012	271	4,5
Fraserburg	1 198	67	5,6
Gordonia	27 870	3 147	11,3
Hanover	1 125	231	20,5
Hartswater	7 496	3 218	42,9
Hay	3 065	556	18,1
Herbert	5 671	1 920	33,9
Hopetown	3 104	290	9,3
Kenhardt	2 964	356	12,0
Kimberley	38 435	5 640	14,7
Kuruman	5 684	1 210	21,3
Namaqualand	18 965	5 899	31,1
Noupoort	1 875	219	11,7
Philipstown	2 290	329	14,4
Postmasburg	12 990	2 067	15,9
Prieska	5 188	1 239	23,9
Richmond (C)	1 930	346	17,9
Sutherland	1 055	84	8,0
Victoria West	3 121	375	12,0
Walvisbaai/Bay	0	0	0,0
Warrenton	6 089	2 425	39,8
Williston	1 351	66	4,9

7.3.2 Retirement facilities

Introduction

The current dispensation on ageing in South Africa does not take demographic realities into account. The white population is significantly older than the rest of the population. "Demographic projections indicate that over the next 20 years the proportion of elderly people in the population will increase. The annual increase of older persons will result in a total of 3,4 million aged persons by 2015. The estimated percentage of persons aged 80 years and over is increasing. Persons older than 80 years of age are particularly vulnerable, especially older women and the historically disadvantaged" (White Paper for Social Welfare, 1996:93).

Cost of care of the elderly

There is an unrealistic emphasis on institutional care for older persons in the white community. The average unit cost of between R11 000 and R22 000 per person per annum for institutional care indicates that the current dispensation is unaffordable. There is also an inappropriate emphasis on the government's responsibility for the care of the aged. There is limited information on services provided by informal service providers. "About 61% of the total national welfare budget is spent on social security and social welfare services for the elderly" (White Paper for Social Welfare, 1996:93). An in-depth evaluation of the present situation regarding ageing has been launched by the Department of Welfare together with all stakeholders.

Lack of retirement provision

"Economic conditions in South Africa are unfavourable, and few job opportunities exist. Large numbers of South Africans are unemployed, work in the informal sector or work in low-wage categories and consequently lack the means to save for their retirement. For those employed in the formal sector, preparation for retirement is inadequate or completely lacking. There are not enough incentives for financial provision for retirement and old age. It is as a result of these factors that elderly persons are vulnerable and are often in need of social support" (White Paper for Social Welfare, 1996:93).

Disparities and inappropriate services

"Racial, urban and rural disparities exist in service provision, particularly regarding old age homes. Old age homes and service centres for the elderly are occupied and used largely by whites. There are backlogs in providing facilities and services for the elderly as well as affordable housing in developing and underdeveloped communities, with an oversupply and underutilisation of other facilities and services in some communities. There is an overemphasis on institutional care and informal care is not fully acknowledged in social programming" (White Paper for Social Welfare, 1996:94).

Social support systems for the care of black older persons have disintegrated in some communities owing to a number of factors such as violence and displacement. Recreational services for older persons are mostly geographically and financially

inaccessible, and are also inadequate in disadvantaged communities. There is a lack of appropriate and affordable accommodation for the elderly. Older people, especially those who are disadvantaged, women and persons over 80 years of age are generally nutritionally vulnerable (White Paper for Social Welfare, 1996).

Approach to ageing

"There needs to be a shift away from the notion of 'care of the aged' to 'ageing', which can be defined as a holistic and positive approach, that recognises ageing as a natural phase of life without denying the special needs of older persons. The basic principle underlying ageing is to enable older persons to live active, healthy and independent lives for as long as possible. The family is the core of the support systems for the elderly" (White Paper for Social Welfare, 1996:94).

Community-based services

Community-based services with the family as the core support system should be the foundation of a new dispensation on ageing. A good balance should be struck between individual, family, community and government responsibility for older persons. Social systems to provide the elderly with essential social services should be developed (White Paper for Social Welfare, 1996).

Ethics and perceptions

A generally acceptable ethical viewpoint that addresses the needs and rights of the aged is a prerequisite for a just and responsible policy. A social commitment to a holistic approach to addressing the needs of the elderly is needed.

"Different and changing perceptions of old age and the social status of older persons will affect society's understanding of their welfare needs. There needs to be a good balance between an emphasis on duration of life and quality of life" (White Paper for Social Welfare, 1996:95).

Guidelines for strategies

National strategy

A national ageing strategy is being developed by the Department of Welfare together with all stakeholders. The following principles, guidelines and recommendations support the proposed transformation approach above (White Paper for Social Welfare, 1996):

- Every individual has the personal responsibility to provide for his or her retirement and old age.
- All organisations in civil society have the social responsibility to provide and care for their older members who are in need.
- Government has the responsibility to provide for the needs of disadvantaged, destitute and frail older persons who require 24-hour care and who do not have the financial resources to meet their own needs.
- Homes for older persons should provide only for the frail elderly. Provision of

frail care should be limited to a maximum of 2% of the number of persons over 65 years.

- All old age homes have a responsibility to provide essential outreach services in the community. Creative options are needed to accommodate elderly persons who are destitute or homeless.
- Appropriate, adaptable and affordable housing for older persons and their families is the cornerstone of any new dispensation. The Department of Welfare will co-operate with the Department of Housing to develop a strategy to address this need as a matter of priority.
- The Department of Welfare and welfare organisations will advocate increased access of the elderly to affordable primary health care and other basic social services, particularly in rural areas. The welfare sector will also co-operate with the Department of Health to facilitate access to nutritional programmes. These services and programmes are critical to ensuring that older persons remain in the community for as long as possible.
- All social policies and programmes will demonstrate a commitment to and promote the concept of integrating the aged into society, that is, a society in which ageing is a natural part of the life cycle.
- Social services to older persons in need will be community-based. Family care will be the baseline of age management programmes. Home care of elderly people will be encouraged. Capacity-building programmes will be provided to promote home care, including support programmes for care-givers. Options such as day care, short-stay centres and outreach programmes will be explored.
- A plan of action with stakeholders to eliminate all forms of racial discrimination in government-funded services will be implemented immediately. Any planning concerning equity of services will be deeply sensitive to people's diverse values and traditions.
- The protection of the rights of older persons requires special attention given the prevalence of age discrimination, abuse and exploitation, particularly regarding social grants.

Strategy for social security for elderly people

- The government will advocate that all people in formal employment belong to a compulsory retirement scheme. Public education programmes will be provided to promote retirement planning.
- The government will also negotiate with other relevant stakeholders to ensure that retirement contributions are fully transferable when changing employment.
- Social assistance programmes will continue to be provided to support elderly people who qualify for such benefits.
- The development of a savings scheme will be explored to encourage individuals to take responsibility for their own retirement as well as to alleviate the pressure on the social grants system (White Paper for Social Welfare, 1996).

Grants for elderly persons

"Grants for elderly persons comprise a large proportion of overall social assistance. The number of elderly South African beneficiaries has stabilised, with fairly good coverage (80%), but there are still particular pockets where many eligible people do

not get a grant. The impact of a grant income on household income for people in poverty is dramatic. The majority of people in poverty who are not white live in three-generation households, and the grant is typically turned over for general family use. In 1993, there were 7,7 million people in households that received a state grant. For black South Africans, each pensioner's income helped five other people in the household" (White Paper for Social Welfare, 1996:58).

Retirement dwellings in the Northern Cape

The South African Council for the Aged database (1996) states that there were 40 662 persons over the age of 65 years in the Northern Cape during 1996. To cater for their accommodation needs, 2 916 units or dwellings were developed with government funds and a further 116 units or dwellings approximately were privately developed. Thus, a total of 3 032 dwellings were established to meet the needs of 40 662 people over the age of 65, resulting in a service provision rate of 7,43%.

Different forms of housing and care provision are provided for the aged in the Northern Cape:

- Sheltered housing or institutional provision caters for 10% of the whites (second highest in country), 0,2% of the blacks, 0,8% of the coloureds and zero of the Indians.
- Community services are basically for whites only. Only 868 of the coloured, black or Indian elderly are served by service centres, while more than 3 400 of the white elderly have access.

Service provision for the aged in most parts of the Northern Cape is insufficient.

According to the map, Fraserburg (25%) is the only district in the 20 to 25% occupancy range. Williston (19%), like Fraserburg, also experiences the positive effects of service distribution because of its proximity to Fraserburg.

The rural areas are the worst off: they form two clusters of districts in the 0 to 5% range. The first cluster stretches from east to west and consists of Namaqualand, Kenhardt, Gordonia, Postmasburg, Barkly West, Warrenton, Herbert, and Carnarvon. The second cluster is to the south-east of the province and consists of Philipstown, Hanover, Noupoort, Richmond and De Aar.

Service provision for the aged within the district of Kimberley, the capital and diamond mining centre of the province, is at 10%. Surrounding Kimberley are three districts (Barkly West, Herbert, Warrenton) that have between 0 and 5% lower levels of service provision. This indicates a vast difference in care for the aged between the capital and the surrounding districts.

In the Northern Cape there is an oversupply of institutional care for the whites and a total underprovision for the other groups which means racial exclusivity dominance service provision. Furthermore, several other problems have hindered service provision for the aged in the Northern Cape. Firstly, the Council for the Aged in the Northern Cape has been unable to run a provincial office in the Northern Cape for some time, with result that development work has not been undertaken. Secondly,

luncheon clubs have not yet taken off in the province. Thirdly, there has been a shortage of affordable housing options. Fourthly, service provision in underdeveloped communities has been inadequate. Finally, co-ordination and training in the Northern Cape is difficult due to the great distances that people have to travel.

S. Eckley
The South African Council for the Aged

MAP 13 : PERCENTAGE POPULATION AGED 65 YEARS OR OLDER IN RETIREMENT DWELLINGS

Source : CSS

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Table 13 Percentage population aged 65 years or older in retirement dwellings

DISTRICT	INSTITUTIONAL POPULATION	TOTAL AGED 65 - 99	% OCCUPANCY
Barkly West	9	1 589	1
Britstown	36	408	9
Calvinia	112	1 493	8
Carnarvon	42	874	5
Colesberg	61	680	9
De Aar	68	1 302	5
Fraserburg	88	349	25
Gordonia	335	6 125	5
Hanover	0	197	0
Hartswater	80	1 378	6
Hay	47	625	8
Herbert	40	1 265	3
Hopetown	53	656	8
Kenhardt	25	729	3
Kimberley	801	8 261	10
Kuruman	83	882	9
Namaqualand	88	3 101	3
Noupoort	4	428	1
Philipstown	0	528	0
Postmasburg	89	1 680	5
Prieska	147	1 030	14
Richmond (C)	12	339	4
Sutherland	35	339	10
Victoria West	73	662	11
Warrenton	49	1 197	4
Williston	69	367	19

7.4 Water and sanitation

The sections covering the national water and sanitation goal, the basic service provision policy, reconstruction and development, the water supply and sanitation policy, water supply, the sanitation problem and its impact and looking ahead were abridged from the Water Supply and Sanitation Policy White Paper of November 1994 and the Draft National Sanitation Policy of June 1996. The provincial analysis was conducted by the HSRC.

National water and sanitation goal

The goal of the government is to ensure that all South Africans have access to essential basic water supply and sanitation services. This must be available at a cost that is affordable to households and the country as a whole.

Basic service provision policy

"The policy of the Department of Water Affairs and Forestry, in full support of the objectives and targets of the Government's Reconstruction and Development Programme, is to ensure that all South Africans can have access to basic water supply and sanitation services within seven years or less" (White Paper, 1994:15). The following section of the White Paper provides basic guidelines for the provision of services and for capacity building and training.

"The setting of guidelines and standards must be approached with caution. Guidelines are intended to assist decision making while standards are enforceable absolute limits. The rigid application of guidelines or inappropriate standards can have the opposite effect to that intended. An example would be the closure of 'sub-standard' water supplies which forces communities to revert to sources of even worse quality.

"Given that they are chosen to be the minimum needs to ensure health, the levels of service presented below should be seen as minimum standards to be applied in publicly funded schemes unless a relaxation has been specifically approved. This does not mean that higher standards cannot be applied. However, there is a direct correlation between the standard of service and the cost, both in terms of initial capital and operation and maintenance. Where higher standards of service are to be provided, the costs will not normally be supported by the programmes of the Department" (White Paper, 1994:15).

Reconstruction and development

"The Reconstruction and Development Programme (RDP) adopted by the Government of National Unity is more than a list of the services required to improve the quality of life of the majority of South Africans. It is not just a call for South Africans to unite to build a country free of poverty and misery. It is a programme designed to achieve this objective in an integrated and principled manner" (White Paper, 1994:1). The RDP principle of an integrated and sustainable programme has already been identified as critical to the success of service provision. It is of little value to have a water supply and sanitation strategy that is not part of a comprehensive development strategy.

"The need for development to be a people-driven process is fundamental. There is wide international experience that confirms the view that the provision of services in poor communities will fail if the people themselves are not directly involved. The involvement and empowerment of people is thus a cornerstone of the approaches proposed. One reflection of this must be the democratisation of the institutions at all levels of the sector since they are often among the first points of contact between communities and the organised State.

"Since water in particular can easily become a focus of conflict within and between communities, the development of effective delivery mechanisms must contribute to the RDP principle of achieving peace and security for all. Related to this, the very establishment of the goal of assuring that all South Africans have access to the basic services needed to ensure their health is a contribution to the process of nation-building" (White Paper, 1994:6).

Finally, the link between reconstruction and development remains a guiding concept. The RDP identifies the provision of infrastructure for services such as water supply and sanitation as one of the key elements of its strategy for developing the South African economy along its new path. The way in which services are provided must ensure that they do not simply satisfy people's basic needs, but also contribute to the growth of a dynamic economy, which is increasingly able to provide all South Africans with opportunities for a better life.

Water supply and sanitation policy

Policy principles

Local and international experience and the premises of the Reconstruction and Development Programme have led to the adoption of the following principles as the basis for the policy that follows. These principles assume a context of universal human rights and the equality of all persons regardless of race, gender, creed or culture.

- **Development should be demand driven and community based**

Decision making and control will be devolved as far as possible to accountable local structures. There is a reciprocal obligation on communities to accept responsibility for their own development and governance, with the assistance of the state.

- **Basic services are a human right**

This refers to a right to a level of services adequate to provide a healthy environment. It does not imply the right of an individual person or community to demand services at the expense of others.

- **"Some for All", rather than "All for Some"**

To give expression to the constitutional requirements, priority in planning and allocation of public funds will be given to those who are presently inadequately served.

- **Equitable regional allocation of development resources**

The limited national resources available to support the provision of basic services

should be equitably distributed among regions, taking account of population and level of development.

- **Water has economic value**

The way in which water and sanitation services are provided must be in accordance with the growing scarcity of good quality water in South Africa in a manner that reflects their value and does not undermine long-term sustainability and economic growth.

- **The user pays**

This is a central principle to ensure sustainable and equitable development, as well as efficient and effective management.

- **Integrated development**

Water and sanitation development is not possible in isolation from development in other sectors. Co-ordination is necessary with all tiers of government and other involved parties. Maximum direct and indirect benefit must be derived from development in, for instance, education and training, job creation and the promotion of local democracy.

- **Environmental integrity**

It is necessary to ensure that the environment is considered and protected in all development activities. Appropriate protection of the environment must be applied, including if necessary even prosecution under the law. Sanitation services that have unacceptable impacts on the environment cannot be considered to be adequate.

- **Sanitation is about health**

Sanitation is far more than the construction of toilets; it is a process of improvements that must be accompanied by promotional activities as well as health and hygiene education. The aim is to encourage and assist people to improve their health and quality of life.

- **Sanitation is a community responsibility**

Improvements in health through improved sanitation are most likely to be achieved when the majority of households in a community are involved. Sanitation is therefore a community responsibility, and this must be emphasised through sanitation awareness programmes (National Sanitation Policy, 1996).

Water supply

South Africa has a substantial economy with a well-developed infrastructure. However, significant inequalities exist in both distribution and access to the infrastructure. This is particularly applicable to domestic water, one of the fundamental needs.

History has shown that clean water is the single most important factor in sustainable primary health, and consequently productivity and growth of the country. Evidently water resources have a strategic interdependence that surpasses local interests if the country as a whole is to function effectively.

Many changes have taken place in South Africa since the national elections of April 1994. One of the most profound changes to impact on the future role of the Department of Water Affairs and Forestry (DWAF) was the incorporation of the former homelands into the nine national provinces. This has had the effect of a more equitable resource disposition and a desire to redirect resources to the poorer communities. At the same time it has exposed deficiencies in administration. To correct this basic imbalance a major community water and sanitation supply programme is required. The DWAF has taken up this challenge and assumed a new role in the provision of community water supply and sanitation (CWSS).

Basic water supply is defined as follows:

- Quantity: 25 litres per person per day.
- Distance: the maximum distance that persons should have to cart water to their dwelling is 200 m.
- Quality: the quality of water provided as a basic service should be in accordance with currently accepted minimum standards with respect to health-related chemical and microbial contaminants. It should also be acceptable to consumers in terms of its potability (taste, odour and appearance).
- Flow: the flow rate of water should not be less than 10 litres a minute.
- Reliability: water availability should not fail due to drought more than one year in fifty, on average (White Paper, 1994).

The sanitation problem and its impact

Approximately 21 million South Africans do not have access to adequate sanitation facilities. Those who have inadequate sanitation may be using the bucket system, unimproved pit toilets or the veld. Furthermore, there is a disturbing increase in poorly designed or operated waterborne sewerage systems. When these fail, the impact on the health of the community and others downstream, and the pollution of the environment are extremely serious.

Inadequate excreta disposal facilities, combined with unhygienic practices, represent South Africa's sanitation problem. Often the unhygienic practices are related to

- a lack of access to health and hygiene education,
- inadequate water supplies,
- poor facilities for the safe disposal of water and other domestic waste,
- inadequate toilet facilities (National Sanitation Policy, 1996).

The effects of the sanitation problem are threefold:

- **Health impact** - the impact of inadequate sanitation on the health of the poor is significant in terms of the quality of life, and the education and development potential of communities.
- **Economic impact** - poor health keeps families in a cycle of poverty and lost income. The national cost of lost productivity, reduced educational potential and curative health care is substantial.
- **Environmental effects** - inadequate sanitation leads to dispersed pollution of

water sources. This in turn increases the cost of downstream water treatment, as well as the risk of disease for communities who use untreated water (National Sanitation Policy, 1996)

Implementation approach

"The absence of a coherent national programme to improve community sanitation has left an obvious legacy. Nearly half of South Africa's population does not have, within their own homes, the healthy environment promised to them by the Constitution. There is a glaring need for a structured programme to address this problem.

"Given the limited practical experience in the field and the evolving institutional arrangements at local level, such a programme must be flexible enough to develop and change over time. It must build on the lessons of experience and reinforce the role of local government as the implementors of service provision.

"It is therefore proposed that there be an initial two-year start-up phase. During this period, there should be an increase in funding to sanitation to start a limited number of projects in all of the Provinces. Existing pilot projects and research will continue, as will the development of the health and hygiene and capacity building 'software'. The consultation process must also continue" (National Sanitation Policy, 1996:28).

Experience gained from these activities will then be used to design and launch a full-scale national programme that can meet the ambitious goals set for the sector of meeting the basic needs of all South Africans within ten years.

7.4.1 Access to sanitation facilities

Access to waterborne sewerage and septic tanks

For waterborne sewerage and septic tanks to be provided there must be running water available in the house. This does not mean that running water and waterborne sewerage or septic tanks will necessarily be provided simultaneously.

The map shows that the districts of Warrenton, Barkly West and Herbert, which surround Kimberley, fall into the lowest range of provision with respective percentages of access of 47, 39 and 45. Kimberley has a relatively high percentage access of 72%. De Aar has the highest percentage access with 83, while Hanover and Richmond to the south both have 55% access. To the north of De Aar, Britstown and Philipstown have 63 and 64% access, respectively. The central and southern districts form a region that has reasonable levels of provision ranging from 68 to 73% access.

Districts that should be prioritised fall in the north of the province immediately around and west of Kimberley. These include Hopetown, Herbert, Hay, Barclay West, Warrenton, Hartswater, Kuruman and Gordonia. Richmond and Hanover to the south of De Aar, and Namaqualand in the west also require urgent attention.

Access to bucket and pit latrines

There is a relatively high provision of bucket and pit latrines in all the districts prioritised according to limited access to waterborne or septic tank sewerage systems. This does not provide for upgrading as these systems are considered inadequate and will be phased out and replaced with adequate systems. These will need to be at least VIP latrines.

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MAP 14 : PERCENTAGE HOUSEHOLDS WITH ACCESS TO BUCKET AND PIT LATRINE FACILITIES

Source : NELF Database

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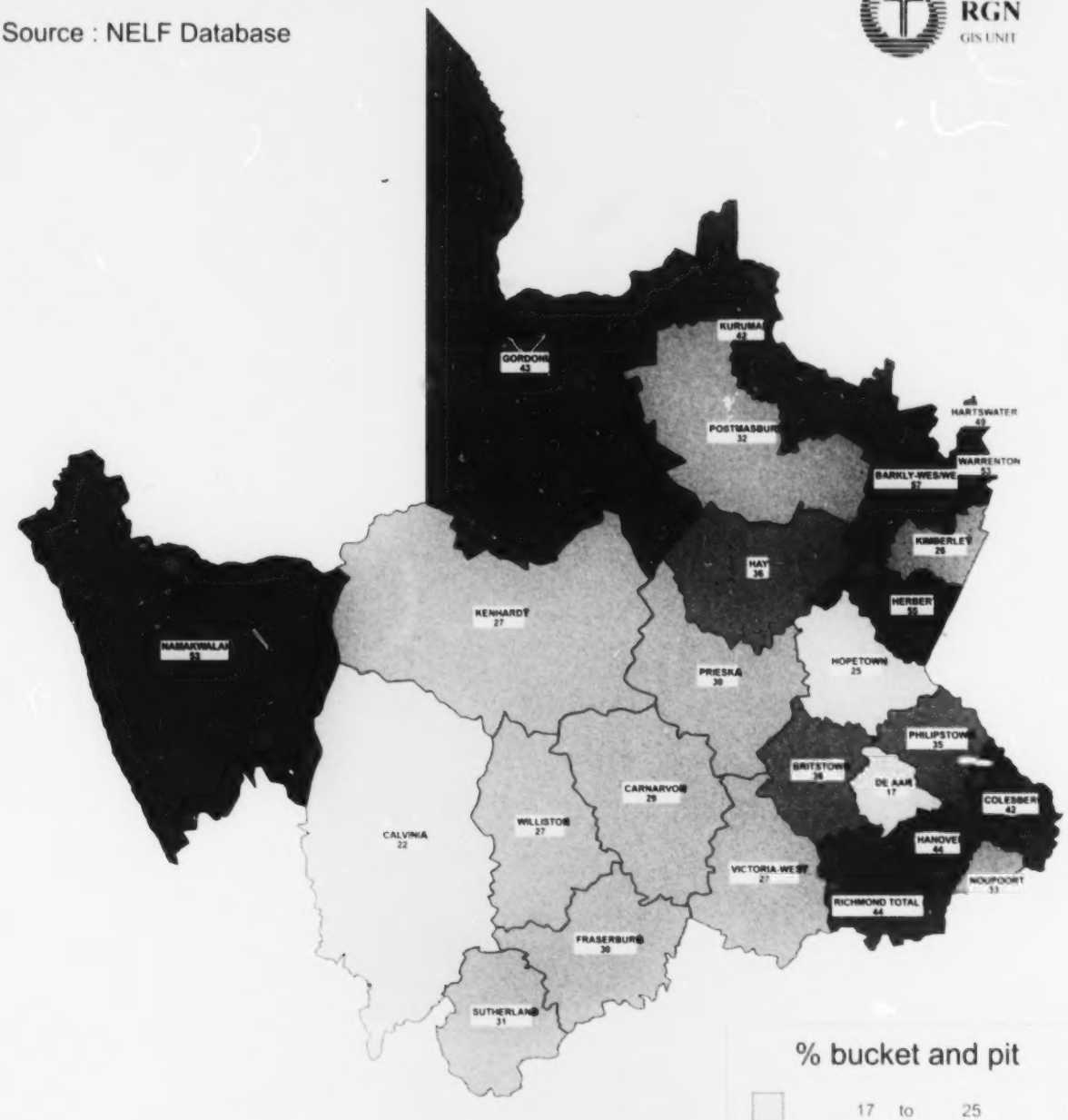

% bucket and pit

	17	to	25
	25	to	33
	33	to	41
	41	to	49
	49	to	57

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Table 14 Percentage households with access to bucket and pit latrine facilities

DISTRICT	HOUSEHOLDS	HOUSEHOLDS WITH BUCKET LATRINES	HOUSEHOLDS WITH PIT LATRINES	% HOUSEHOLDS WITH ACCESS TO BUCKET OR PIT LATRINES
Barkly West	7 586	192	4 163	57
Britstown	1 601	34	546	36
Calvinia	5 490	25	1 208	22
Carnarvon	2 568	48	684	29
Colesberg	3 448	124	1 331	42
De Aar	6 012	145	878	17
Fraserburg	1 198	5	353	30
Gordonia	27 870	465	11 441	43
Hanover	1 125	48	451	44
Hartswater	7 496	34	3 631	49
Hay	3 065	34	1 075	36
Herbert	5 671	82	3 052	55
Hopetown	3 104	13	759	25
Kenhardt	2 964	70	733	27
Kimberley	38 435	1 568	8 366	26
Kuruman	5 684	105	2 260	42
Namaqualand	18 965	1 078	9 004	53
Noupoort	1 875	62	566	33
Philipstown	2 290	61	749	35
Postmasburg	12 990	456	3 682	32
Prieska	5 188	45	1 513	30
Richmond (C)	1 930	65	782	44
Sutherland	1 055	4	326	31
Victoria West	3 121	41	810	27
Warrenton	6 089	272	2 945	53
Williston	1 351	6	353	27

MAP 15 : PERCENTAGE HOUSEHOLDS WITH ACCESS TO SEPTIC TANK OR WATERBORNE LATRINE FACILITIES

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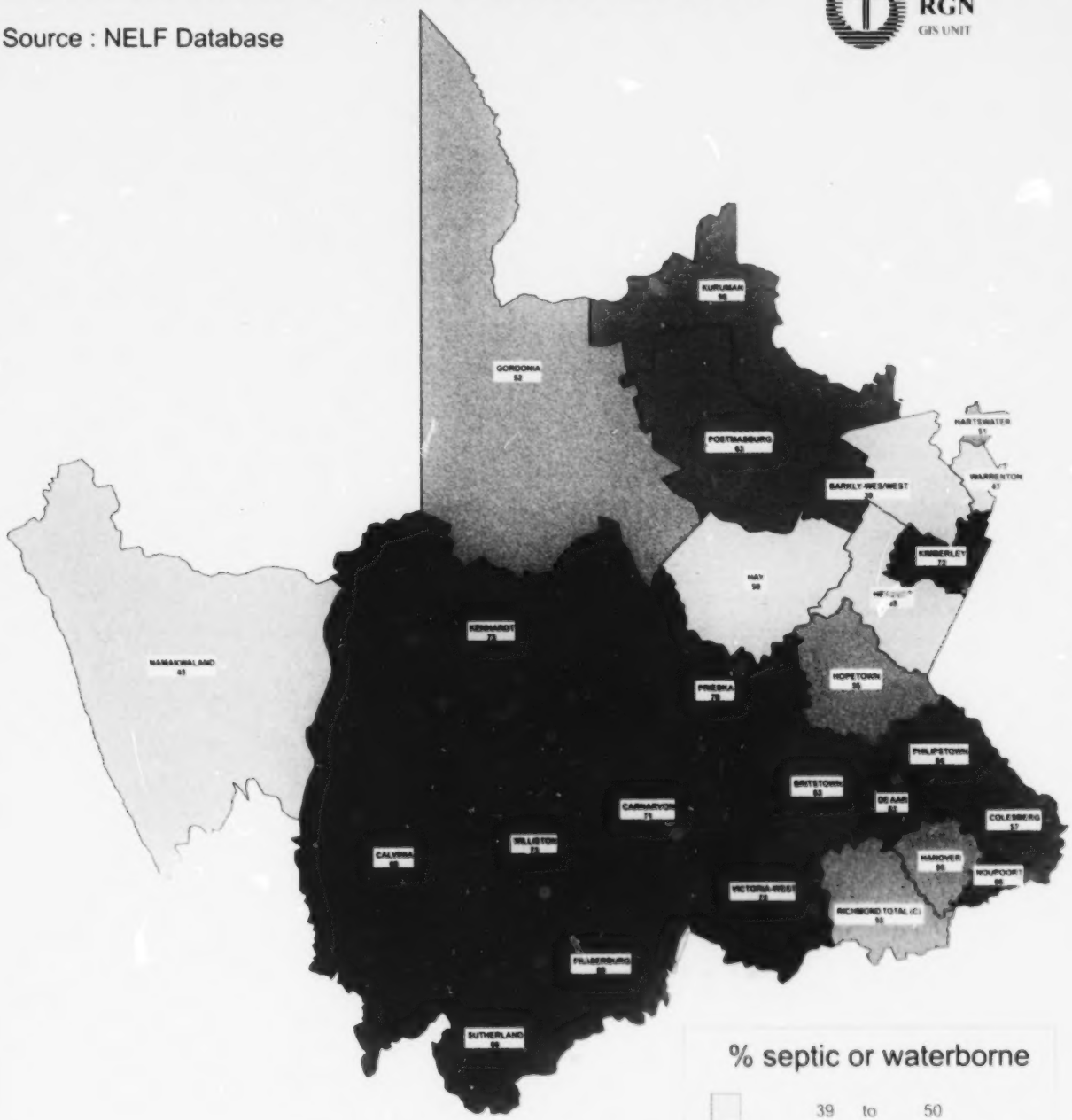
Source : NELF Database



% septic or waterborne

	39	to	50
	50	to	55
	55	to	64
	64	to	71
	71	to	83

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Table 15 Percentage households with access to septic tank or waterborne latrine facilities

DISTRICT	HOUSEHOLDS	HOUSEHOLDS WITH WATERBORNE LATRINES	HOUSEHOLDS WITH SEPTIC TANKS	% HOUSEHOLDS WITH ACCESS TO WATERBORNE SEWERAGE OR SEPTIC TANKS
Barkly West	7 586	2 386	570	39
Britstown	1 601	774	234	63
Calvinia	5 490	2 938	779	68
Carnarvon	2 568	1 492	335	71
Colesberg	3 448	1 712	263	57
De Aar	6 012	4 839	135	83
Fraserburg	1 198	583	249	69
Gordonia	27 870	11 708	2 873	52
Hanover	1 125	519	98	55
Hartswater	7 496	2 986	835	51
Hay	3 065	1 053	475	50
Herbert	5 671	1 750	774	45
Hopetown	3 104	1 309	399	55
Kenhardt	2 964	1 647	505	73
Kimberley	38 435	27 397	325	72
Kuruman	5 684	2 551	645	56
Namaqualand	18965	7 476	1 151	45
Noupoort	1 875	1 171	62	66
Philipstown	2 290	1 203	260	64
Postmasburg	12 990	7 372	759	63
Prieska	5 188	3 156	462	70
Richmond (C)	1 930	886	184	55
Sutherland	1055	494	223	68
Victoria West	3 121	1 914	344	72
Warrenton	6 089	2 509	349	47
Williston	1 351	727	257	73

7.4.2 Access to water facilities

The data source for this provincial analysis was the NELF database developed by Eskom in 1994. The accuracy of this database has been questioned within Eskom. Its accuracy can be tested however, by summing the percentages of households with access to in-house water, garden taps only, community taps only and no water supply. This should total 100%. Of the 26 districts in the Northern Cape, 17 have total percentages of over 99; 5 districts are between 95 and 99 %; 2 between 90 and 95%; 1 between 85 and 90%, and 1 between 80 and 85%. Three of the districts scoring below 95% border on or are close to the capital of Kimberley: they are Postmasburg, Hay and Hopetown. Calvinia, also scoring below 95%, is in the south-west of the province.

On-site water provision

Households with running water in the house or in the garden only fall into this category. The map shows that households within the Kimberley district, the capital and diamond mining centre of the province, have a 73% level of provision of on-site water. Surrounding Kimberley are three districts that are between 31 and 24% lower in levels of service provision. This indicates a vast difference in on-site provision between the capital and the surrounding districts.

De Aar, the railroad network centre, has the highest on-site provision at 84%. North-east and west of De Aar are Philipstown and Britstown with on-site provision of 67% and 65% respectively. To the south-east and west of De Aar are Hanover and Richmond, both with 58% on-site water. In contrast to the Kimberley area where all the surrounding districts have substantially less on-site provision, De Aar's neighbours lag by 26 and 19% in on-site provision in the south and north respectively.

The central and southern districts form a homogenous region of on-site provision in the 67 to 76% range. These remote areas, which are between 68% and 55% urbanised, have a similar level of on-site provision to Kimberley with an urbanised population of 95%. This suggests that there has been rapid urbanisation in the Kimberley district but that on-site provision has not increased at a similar rate. The districts of Herbert, Barclay West and Warrenton that surround Kimberley have a much lower urbanised population of 40, 54 and 64%, respectively. These three districts have the lowest on-site provision and could well be facing the spillover of informal urbanisation from Kimberley. If future provision is to give equitable access across the districts of the province, then Herbert, Barclay West and Warrenton will need to be prioritised.

Off-site water provision

Households that access piped water from communal street taps fall into this category. As can be expected from the above discussion, areas with low on-site provision in general correspond to areas of high off-site provision. The areas of highest off-site provision mostly cluster around Kimberley, with percentages of off-site provision ranging from 29 to 31%. This basic infrastructure can be upgraded to provide more on-site services.

The districts to the south of De Aar have a higher level of off-site provision than the areas to the immediate north. There is a positive correlation between low levels of on-

site provision and high levels of off-site provision around the urban areas of Kimberley and De Aar. The central and southern regions were on a par with Kimberley in terms of on-site provision, but have a much lower level of off-site provision of between 10 and 15%.

The percentages of households with no access to any water supply confirm the need to prioritise Herbert, Barclay West and Warrenton as suggested in the section on on-site provision. Richmond, to the south of De Aar, also has a high level of households with no access to water. Gordonia and Kuruman, in the north, also need to be prioritised as they have between 17 and 21% of households without water supply.

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Current initiatives

The services currently provided by the Department of Water Affairs and Forestry (DWAF) are water supply and sanitation, and these are provided in accordance with the White Paper and the RDP basic levels of service. The basic level is defined as 25 litres of water per persön per day within 200m of his home, and a sanitation system equivalent to a Ventilated Improved Pit-latrine (VIP) per 6-8 people.

The DWAF is now involved in rural areas (TRCs) only as service provision to urban areas falls under the municipal infrastructure programme (MIP) managed by the Department of Local Government and Housing. The community water supply and sanitation (CWSS) strategic study has found that, among other things, rural areas have the greatest service backlog, limited management capability, and a poor institutional framework. Although the Department of Provincial Affairs and Constitutional Development is addressing the latter two issues, it is obvious that the problem is a dynamic and multifaceted one.

The Department of Water Affairs and Forestry's division of Community Water Supply and Sanitation has initiated a similar study to determine the service backlog with the aim of addressing it. This exercise includes a broad scanning study to identify the problem, locate it and assess its magnitude. The department is currently interpreting and collating the information gathered, and putting together a long-term strategic plan of development.

The aspects (topics) covered by the study are

- Demographics,
- surface water,
- ground water,
- infrastructure,
- institutional and management,
- water quality,
- sanitation,
- the environment, and
- development cost.

Conclusion

With regard to water provision and sanitation, the following districts head the prioritisation list: Herbert, Barclay West, Warrenton, Richmond, Gordonia, Kuruman, Hopetown, Hartswater, Hanover and Namaqualand.

The first and most important goal is to address basic needs. The department's needs assessment study found that people generally requested higher levels of service; this will be the second goal and should be undertaken with a sound knowledge of the needs and their category; the ability to provide and fund; the socio-economic viability; resource and infrastructure management and the growth in demand.

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MAP 16 : PERCENTAGE HOUSEHOLDS WITH ACCESS TO ON-SITE WATER FACILITIES

Source : NELF Database

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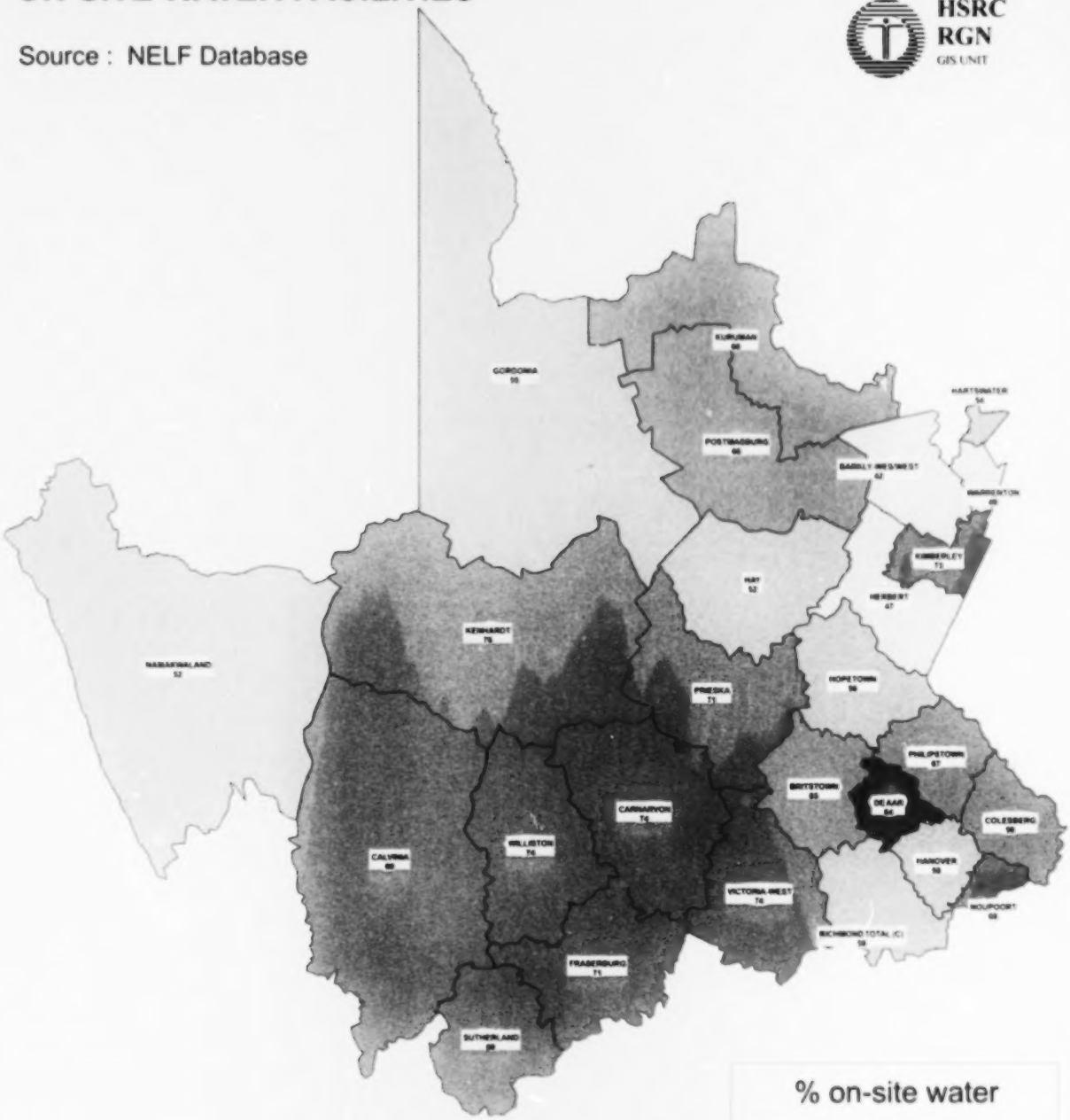

% on-site water

42	to	51
51	to	59
59	to	67
67	to	76
76	to	84

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Table 16 Percentage households with access to on-site water facilities

DISTRICT	TOTAL HOUSEHOLDS	IN-HOUSE TAP	ON-SITE TAP	% ON-SITE
Barkly West	7 586	2 141	1 062	42
Britstown	1 601	761	274	65
Calvinia	5 490	3 091	692	69
Carnarvon	2 568	1 555	344	74
Colesberg	3 448	1 251	784	59
De Aar	6 012	4 794	249	84
Fraserburg	1 198	638	207	71
Gordonia	27 870	12 014	3 411	55
Hanover	1 125	489	159	58
Hartswater	7 496	2 394	1 663	54
Hay	3 065	1 091	491	52
Herbert	5 671	1 490	1 184	47
Hopetown	3 104	1 193	554	56
Kenhardt	2 964	1 629	610	76
Kimberley	38 435	25 126	3 076	73
Kuruman	5 684	2 627	791	60
Namaqualand	18 965	5 040	4 829	52
Noupoort	1 875	1 143	126	68
Philipstown	2 290	1 234	289	67
Postmasburg	12 990	6 928	1 703	66
Prieska	5 188	2 320	1 377	71
Richmond (C)	1 930	874	237	58
Sutherland	1 055	570	162	69
Victoria West	3 121	1 771	549	74
Warrenton	6 089	1 846	1 147	49
Williston	1 351	782	215	74

MAP 17 : PERCENTAGE HOUSEHOLDS WITH ACCESS TO OFF-SITE WATER FACILITIES

Source : NELF Database

HSRC
RGN
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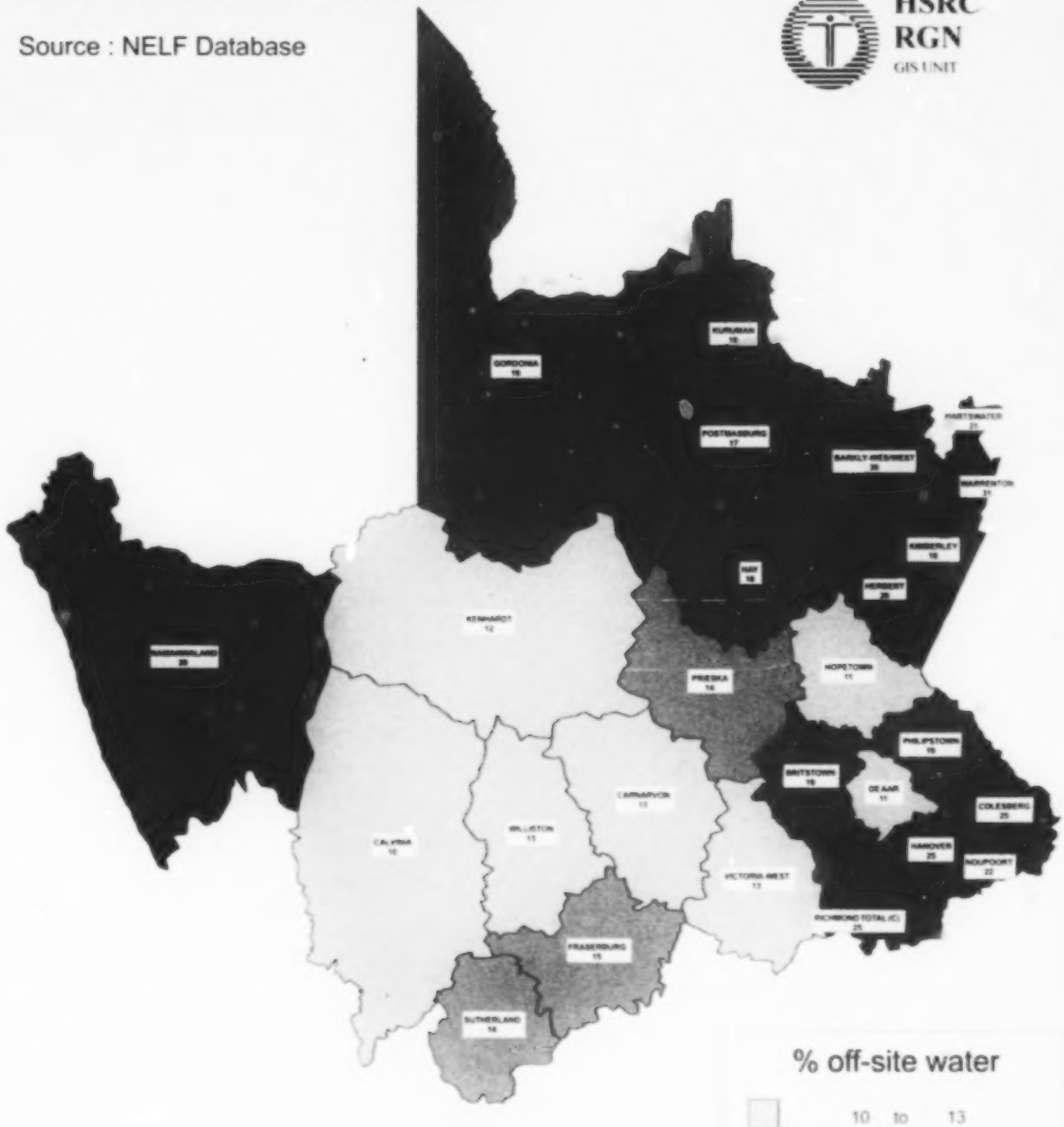

% off-site water

	10	to	13
	13	to	15
	15	to	19
	19	to	25
	25	to	31

N

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100

Table 17 Percentage households with access to off-site water facilities

DISTRICT	TOTAL HOUSEHOLDS	TOTAL HOUSEHOLDS WITH OFFSITE WATER	% HOUSEHOLDS WITH OFFSITE WATER
Barkly West	7 586	2 279	30,0
Britstown	1 601	310	19,4
Calvinia	5 490	570	10,4
Carnarvon	2 568	321	12,5
Colesberg	3 448	861	25,0
De Aar	6 012	654	10,9
Fraserburg	1 198	176	14,7
Gordonia	27 870	5 352	19,2
Hanover	1 125	278	24,7
Hartswater	7 496	1 540	20,5
Hay	3 065	543	17,7
Herbert	5 671	1 620	28,6
Hopetown	3 104	353	11,4
Kenhardt	2 964	367	12,4
Kimberley	38 435	6 985	18,2
Kuruman	5 684	1 077	18,9
Namaqualand	18 965	5 589	29,5
Noupoort	1 875	405	21,6
Philipstown	2 290	428	18,7
Postmasburg	12 990	2 212	17,0
Prieska	5 188	747	14,4
Richmond (C)	1 930	474	24,6
Sutherland	1 055	150	14,2
Victoria West	3 121	402	12,9
Warrenton	6 089	1 880	30,9
Williston	1 351	173	12,8

7.5 Electricity

Introduction

Experience in other countries shows that substantial economic growth is not achieved until the large majority of the population has access to electricity. Electrification and economic growth go hand in hand. This does not mean that introducing electricity to an underserviced area without other social and infrastructural services is going to influence "rural-urban migration, population growth, education and literacy" positively. It is only in countries such as the USA where broad rural development and employment programmes, in conjunction with electrification, have significantly improved the rural quality of life and reduced rural to urban migration" (Golding:1992:2).

"Eskom has accelerated its electrification thrust over the past two years and its programme is on target. Eskom has electrified 639 741 homes since the electrification drive began at the end of 1990. This programme will positively affect the lives of more than eleven million people. It will give them access to a clean, affordable and convenient source of energy and allow them to become part of a modern industrially developing society" (Maree, 1995:3).

The national electrification project

The electrification project began in 1990 in order to bring the benefits that access to electricity brings to more South Africans.

"In 1992 a survey was conducted in South Africa to determine the status of electrification in cities and towns, in trust areas, and in TBVC countries and national states. It was revealed that out of a total of 7,2 million homes, only 3 million were at that stage provided with electricity. This left an enormous 4,2 million homes without, only about 2 million of which could possibly be furnished cost effectively with electricity. The remainder would be difficult to electrify due to either the structure of the dwelling, the distance from the existing grid, lack of access to alternative energy sources, or simply as a matter of affordability" (The Electrification Project, 1995:1).

Once it was agreed that little economic growth could occur without the widespread use of electricity, Eskom committed itself to the electrification of almost one million homes over the following five years, in areas where it had the right to supply. Given the economic recession, the time was ripe to put innovative technology to the test. Eskom decided to follow the route of the "prepayment meter or electricity dispenser" (The Electrification Project, 1995:1), which had been used successfully in other countries.

Electricity supplies in rural areas

Both dense and scattered rural settlements, which are located primarily in former homeland areas, have exceptionally low levels of access to electricity. Furthermore, demographic and electrification data concerning farm workers on commercial farms appear to be inadequate to support electrification planning.

"Many of the homes still needing electricity are situated far from the national grid in remote rural areas with a low-density population. At present only 12% of rural households have access to electricity. Eskom's electrification programme will raise this figure to 30% in 1999 and will have a positive effect on the quality of life. The cost of bringing network electricity to such areas will be very high. Eskom is constantly researching ways to substantially reduce the cost of rural electrification through appropriate technology" (Morgan, 1995:7).

ESKOM and the RDP

Following the adoption of the Reconstruction and Development White Paper by parliament, Eskom published ten commitments demonstrating its support of the RDP. Many of these activities were already under way in the organisation and therefore reflect a change in degree rather than direction for Eskom.

Eskom undertook the following:

- Further reduce the real price of electricity by 15%, so as to become the world's lowest cost supplier of electricity
- Electrify an additional 1 750 000 homes, improving the lives of 11 million South Africans
- Change the staffing profile so that 50% of management, professional and supervisory staff would be black South Africans
- Educate, train and upgrade sufficient numbers of people to meet Eskom's future managerial, technical and other professional staff needs, *inter alia* by employing 370 black trainees and bursars per year, and enabling all Eskom employees to become literate
- Maintain transparency and engage in worker consultation in decision making
- Contribute R50 million per year to the electrification of schools and clinics, and other community development activities, particularly in rural areas
- Enable all Eskom employees to own a home
- Encourage small and medium enterprise development, through Eskom's buying policies and giving of managerial support
- Protect the environment
- Finance the above from own resources and from overseas development funding (Morgan, 1995)

National electrification planning - resources and institutions

"There is no national institution capable of co-ordinating and planning the national electrification programme. At present, planning takes place within each distribution agency, and Eskom assumes responsibility for the bulk of the connections targeted annually. Many municipal distributors have embarked on electrification programmes and conduct in-house planning. However, there is no overall national co-ordination of these activities, and no mechanism to ensure that the targets set by the RDP will be met. Eskom dominates planning for the electrification programme and its implementation, but has no jurisdiction in regions outside its supply areas. The National Electricity Regulator may be in a position to fill this institutional vacuum, but at present has limited capacity to monitor progress or to undertake detailed planning.

"Resources are also limited. Despite improvements over the past few years, there are large inadequacies in the data for many areas of the country. Eskom has begun to refine the demographic and electrification data, but is likely to concentrate on its own areas of supply. It will be some time before these data resources are developed to a point where accurate supply-side and demand-side information is available for the many municipal distributors around the country.

"Despite the limitations, national electrification targets have been set, at least until the year 2000, and the success of the programme will inevitably be judged in relation to these targets. But are national targets desirable? Although they have succeeded in increasing the rate of electrification, they favour a centralised planning and implementation system. But not only does centralised planning require extensive resources, it also affects the process of electrification and the ability of communities to participate in it effectively. The alternative approach is decentralised and demand-driven, with control over investment decisions located at lower tiers. Under this system, there is less need for a national planning institution. Instead more emphasis is placed on the need to monitor progress and provide adequate support to lower-tier organisations" (Davis, 1996:477).

NELF and the regulator

"The National Electrification Forum (NELF) has completed the majority of its work and made an initial recommendation to Government that the distribution sector of the industry should be rationalised, national tariff systems should be implemented and that a national electricity regulatory authority should be established to oversee the industry. The result will be that many local government's will retain the right of supply in their areas. The National Electricity Regulator (NER) will be responsible for licensing all suppliers and ensuring that they perform to set 'standards" (Morgan, 1995:13).

This means that Eskom will have to be licensed and in future will be subject to regulatory jurisdiction. Also, Eskom will become responsible for supplies in large areas of the previous TBVC states and self-governing territories, while possibly handing over staff and assets in some urban areas where it is presently operative.

Community relations
Small business development and job creation

"The electrification programme provides employment for over 4 000 people involved in construction: 2 200 from Eskom and the balance as contractors employed by Eskom. In addition, an estimated 2 300 people are employed in the local manufacturing industry to provide the materials required. Over a thousand people are employed in marketing, maintenance and administration functions in newly electrified areas. Where possible, Eskom uses subcontractors from small businesses in underdeveloped and electrification areas. Training programmes aim at employing members from the local community. Capital development projects affected more than a million people in 1994" (Morgan, 1995).

Community development

Eskom actively promotes community development through programmes designed to assist disadvantaged communities with a strong emphasis on education. Only projects at grassroots level with community support and accountability are supported. Over the past four years funding has risen from R4 million to approximately R40 million annually.

"In support of the electrification programme and Eskom's RDP commitments, Eskom increased its community development contribution by electrifying 562 schools and 21 clinics in 1994. During 1994, the Norwegian Agency for Development Cooperation pledged R15,2 million in grant funding for the electrification of schools and clinics" (Morgan, 1995).

7.5.1 Electricity services and distribution

A survey by Cole Consulting and Setplan (1995) found that Eskom's countrywide electricity network served the province, but that large rural areas had no electricity. A major problem regarding the rural areas was the decentralised and dispersed demands that limited the possibility of expanding the electricity network. Eskom had targeted the Lower Orange area. The Regional Services Councils (RSCs) provided subsidies to rural areas for the electrification of farm employee housing where Eskom power was available or alternatively solar panel installations in areas not serviced by Eskom.

A widely distributed network of power transmission lines covered the Northern Cape. Transmission was by both 66kV and 132kV lines and substations. The former system was relatively older and parts of it were beginning to require refurbishment. Eskom was administered through districts that were combined into regions. It is important to note that three districts and regions do not coincide with political and administrative boundaries, therefore the terms "district" and "region" in the rest of this section refer to Eskom's definition.

The two main regions for the province are the North-Eastern Cape and the North-Western Cape. The North-Eastern Cape comprises Kuruman and most of the Kimberley district, with most of the Vryburg district and part of the Klerksdorp district that are outside the present Northern Province. North-Western Cape consists of the Upington district. Both regions have recently been combined into an Eskom "Northern Cape" region with its headquarters in Kimberley. The southern parts of the province fall under the Cape distributor with its head offices in Cape Town. These southern parts are broadly covered by two Eskom districts, namely Colesberg and Karoo.

According to Cole Consulting and Setplan, Eskom services were provided mostly through Sales and Customer Service Centres (S&CS) and Technical Service Centres (TSC). There were also Phone-In and Walk-In centres in the province. In the Eskom Northern Cape region there was either a S&CS or a TSC, or more usually both, in the following towns: Kimberley, Barkly West, Douglas, Jan Kempdorp, Kathu, Kuruman, Lime Acres, Postmasburg, Van Zylsrus, Upington, Groblershoop, Kakamas, Prieska and Springbok. Coverage by S&CS and TSC of the less populated southern parts of

the province was less extensive with one or other or both present in De Aar, Petrusville, Colesberg and Calvinia.

Electricity consumption

The 1995 survey showed that electricity consumption for the province as a whole was dominated by mining (41%) and supply to municipalities (32%). Direct supply to industrial consumers accounted for 11% although it must be remembered that many businesses buy electricity from the municipality. Supply for railways (8%) and agriculture (7%) accounted for almost all the remaining supply to the province. Households and businesses paying Eskom directly and the direct supply to disadvantaged communities not supplied by municipalities (developing areas) accounted for little over 1% of the provincial electricity consumption.

Not all mines were linked to the Eskom electricity network and in these cases (mostly small prospecting mines mainly along the rivers where even portable transformers coupled to Eskom power were not available) diesel generators were used.

Thirty-one per cent of the provincial electricity was consumed in the Kimberley Eskom district, with the Kuruman and Upington districts consuming 25% and 27% respectively. Under 20% of all provincial electricity was consumed by the Colesberg and Karoo districts.

The pattern of electricity consumption reflected the distribution of the economic activity in the province: 48% of consumption by mining occurred in the Kuruman district, with the Upington district, which includes Namaqualand, consuming a further 40%. Industry in the Kimberley district consumed 57% of all industrial electricity used in the province. The Colesberg and Karoo districts were the two largest consumers of agricultural electricity, consuming 29% and 18% of the provincial supply to agriculture respectively.

Northern Cape electrification projects

According to Cole Consulting and Setplan (1995), Eskom planned substantial capital expenditure in the Northern Cape for the rest of the decade but with a slightly different focus in the two subregions of Eskom's Northern Cape.

Transmission lines in the North-Eastern Cape region are relatively older than those in the North-Western Cape region and some lines would require major refurbishment soon. Around two-thirds of the capital expenditure in the North-Eastern Cape region for the rest of the decade would be spent on the refurbishment of transmission lines. The total planned capital expenditure for 1995 to 1999 was around R43 million. New electrification projects would however be implemented. Projects scheduled for 1995 were at Ikhutseng (Warrenton), Mataleng (Barkly West) and Valspan (Jan Kempdorp), at an approximate capital expenditure of R1,2 million.

The power lines in the North-Western Cape region were relatively newer so a higher proportion of capital expenditure could be spent in growth-related areas, which would include new electrification projects. Only about 10% of total capital expenditure from

1995 to 1999 would be spent on refurbishment with the remainder being earmarked for growth-related areas. New electrification projects were planned in 1995 for Bongani (Douglas), Buffelsrivier (Springbok), Kheis (Garies), Kotzeshoop (Vioolsdrif), Kuboes, Lambrechtsdrif (Groblershoop), Lenardsville, Okiep, Steinkopf (Springbok), Steynsville (Hopetown), Tweerivier (Garies) and Vioolsdrif at an approximate capital cost of R6 million (Cole Consulting and Setplan).

MAP 18 : PERCENTAGE FORMAL HOUSES ELECTRIFIED

Source : NELF Database

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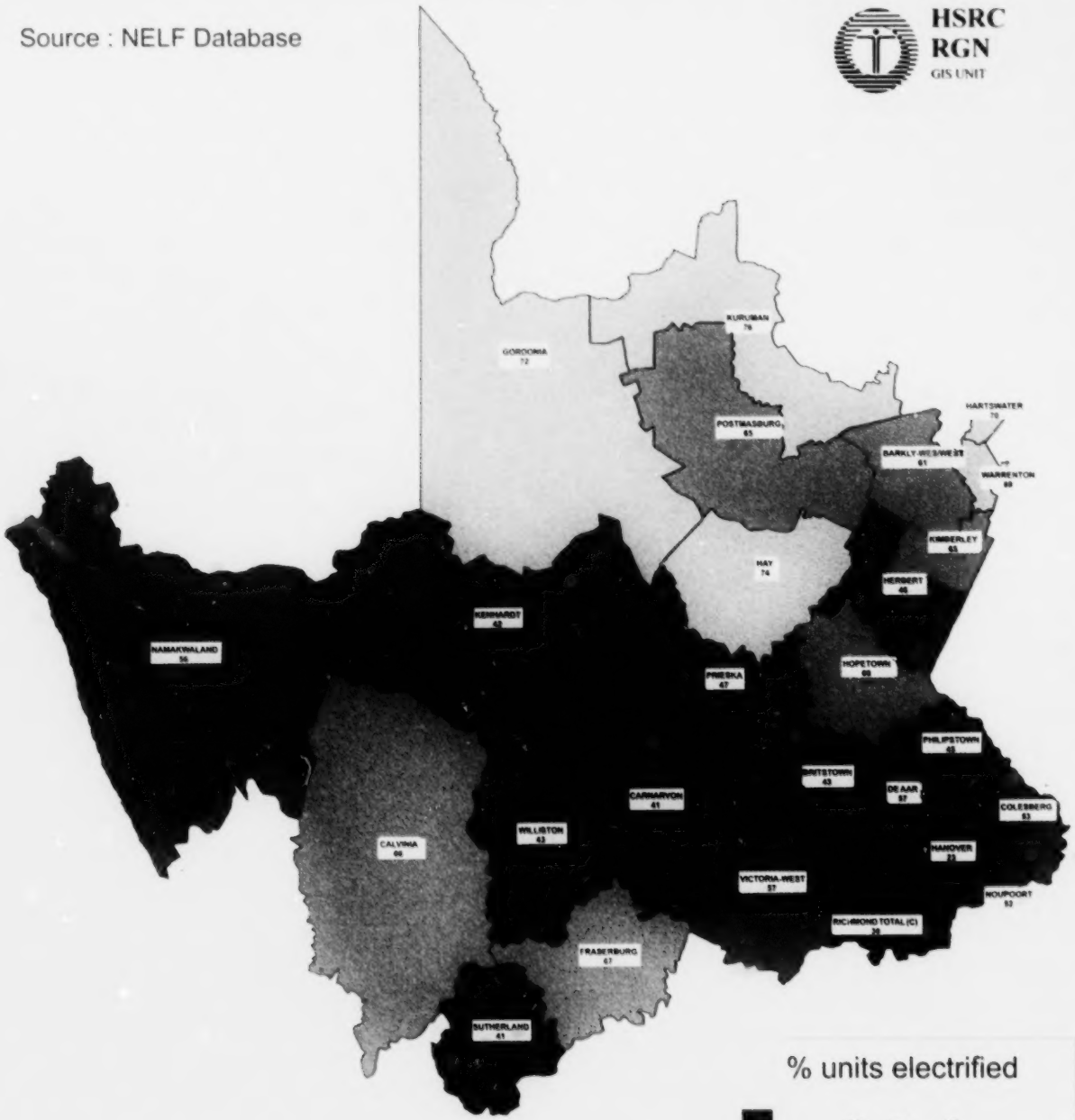

% units electrified

	23	to	42
	42	to	47
	47	to	57
	57	to	69
	69	to	88

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Table 18 Percentage formal houses electrified

DISTRICT	TOTAL ELECTRIFIED FORMAL HOUSES	TOTAL SERVICE POINTS	% ELECTRIFIED HOUSES
Barkly West	2 723	4 447	61,2
Britstown	592	1 386	42,7
Calvinia	3 242	4 907	66,1
Carnarvon	912	2 207	41,3
Colesberg	1 109	2 085	53,2
De Aar	3 241	5 655	57,3
Fraserburg	730	1 097	66,5
Gordonia	14 531	20 289	71,6
Hanover	195	862	22,6
Hartswater	2 615	3 715	70,4
Hay	1 772	2 391	74,1
Herbert	1 456	3 266	44,6
Hopetown	1 785	2 600	68,7
Kenhardt	1 066	2 511	42,5
Kimberley	21 053	32 314	65,2
Kuruman	3 179	4 195	75,8
Namaqualand	6 977	12 556	55,6
Noupoort	836	1 619	51,6
Philipstown	874	1 924	45,4
Postmasburg	6 949	10 632	65,4
Prieska	1 612	3 423	47,1
Richmond	456	1 520	30,0
Sutherland	377	911	41,4
Victoria West	1 435	2 519	57,0
Warrenton	2 773	3 146	88,1
Williston	525	1 225	42,9

MAP 19 : PERCENTAGE INFORMAL HOUSES ELECTRIFIED

Source : NELF Database

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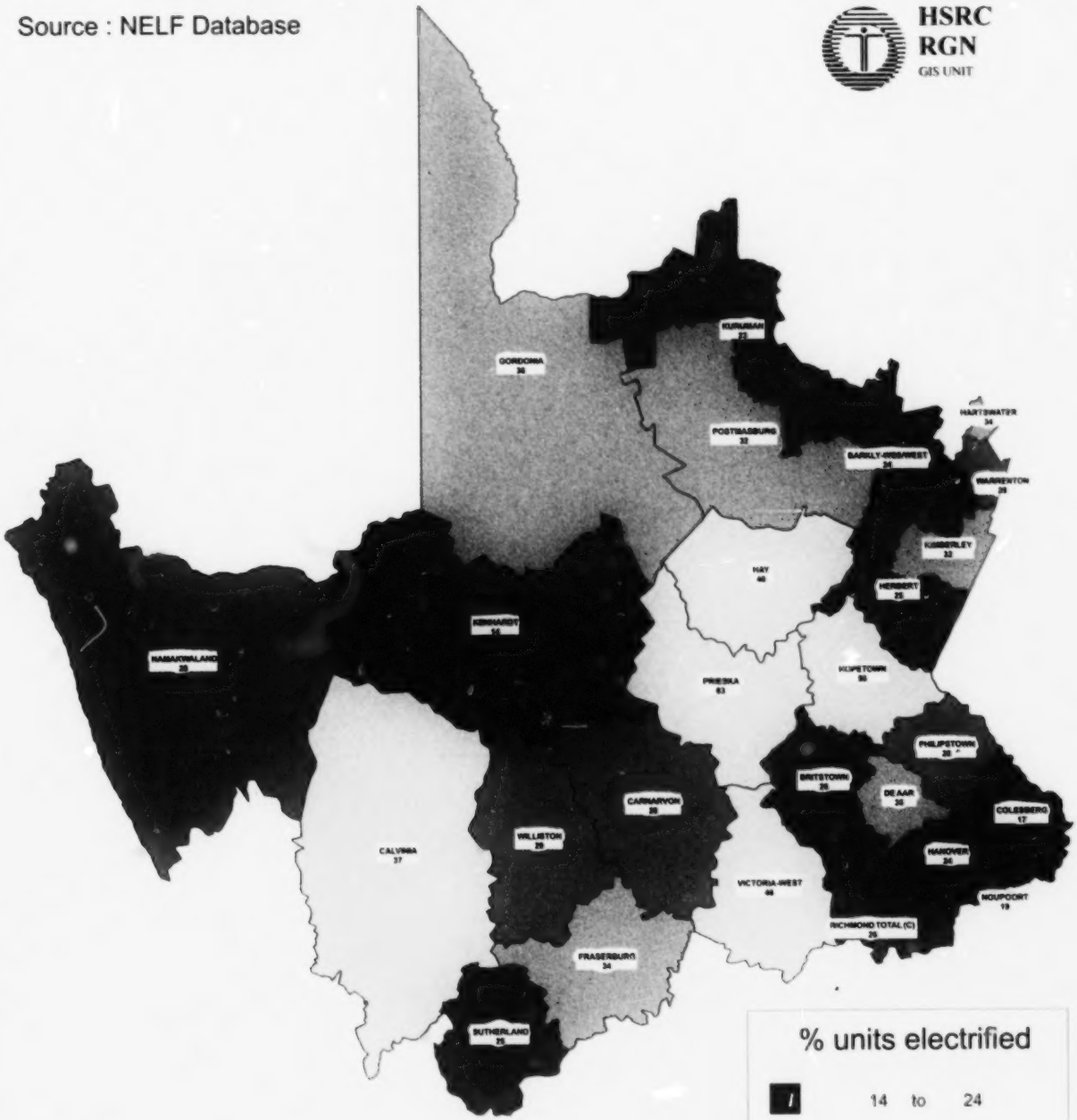

% units electrified

	14	to	24
	24	to	26
	26	to	29
	29	to	36
	36	to	63

N

KM

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Table 19 Percentage informal houses electrified

DISTRICT	TOTAL ELECTRIFIED INFORMAL HOUSES	TOTAL SERVICE POINTS	% ELECTRIFIED HOUSES
Barkly West	596	2 436	24,5
Britstown	38	145	26,2
Calvinia	117	316	37,0
Carnarvon	56	201	27,9
Colesberg	216	1 273	17,0
De Aar	94	271	34,7
Fraserburg	23	67	34,3
Gordonia	1 143	3 147	36,3
Hanover	55	231	23,8
Hartswater	1 093	3 218	34,0
Hay	225	556	40,5
Herbert	477	1 920	24,8
Hopetown	159	290	54,8
Kenhardt	51	356	14,3
Kimberley	1 813	5 640	32,1
Kuruman	284	1 210	23,5
Namaqualand	1 646	5 899	27,9
Noupoort	42	219	19,2
Philipstown	91	329	27,7
Postmasburg	660	2 067	31,9
Prieska	785	1 239	63,4
Richmond	90	346	26,0
Sutherland	21	84	25,0
Victoria West	171	375	45,6
Warrenton	672	2 425	27,7
Williston	19	66	28,8

7.6 Roads

Introduction

"Like so much else in our country South Africa's road infrastructure is an amalgam of both First World and Third World standards. The national and main road structures have played a very significant part in economic development of the country over the last 40 years and are destined to play an even more important part in the future. At the same time there are large sectors of the rural community that are inadequately served by roads. This is a situation which must be addressed as a matter of urgency if we are to achieve the planned levels of social and economic development" (A Future for Roads in South Africa, 1996:1).

South Africa's roads carry between 80 and 90% of all passenger and freight movements in the country. Despite their critical function there is a serious lack of funds for their maintenance and development.

The role of roads in development

"A good road (transport) system has been identified as the second most important catalyst in a country's social and economic development (after education). A former Administrator of the USA Federal Highway Administration stated: 'It was not our wealth which made our good roads possible, but rather our good roads which made our wealth possible.' This is an important message for South Africa which underlines the need for urgent and determined actions to be taken to preserve and, where necessary, improve our road network in the interests of social and economic development in South Africa" (A Future for Roads in South Africa, 1996:3).

Transport, especially road transport, is central to development; without physical access to jobs, health, education and other amenities, quality of life suffers. Without physical access to resources and markets, growth stagnates and poverty reduction cannot be sustained.

"An adequate road system plays a major role in the economic and societal health of a country. Therefore, such a road system should receive an appropriate and stable level of investment in order to establish and maintain the system. Also it should be effectively and efficiently managed to obtain the maximum return on scarce financial and physical resources" (A Future for Roads in South Africa, 1996:3).

Road network classification

"Roads and streets constitute the necessary communication links which provide adequate support for economic growth and which must satisfy the basic accessibility needs, i.e. the ability to be reached, and conversely, the basic mobility needs i.e. the ability to move, or be moved, easily, quickly and efficiently, of the population" (A Future for Roads in South Africa, 1996:7).

It is important to determine a suitable and encompassing classification for roads. An approach must be followed whereby roads are classified by recognising the authorities primarily responsible for their provision as well as the functionality of the different

elements of the total network.

The classification is as follows:

- **National roads**

"The authority primarily responsible is the South African Roads Board. These roads provide mobility in a national context. Traffic on these roads is usually associated with longer travel distances and the design of the roads should make provision for relatively high speeds, and interference with through traffic should be minimised. These roads are provided primarily for economic reasons. They are regarded as strategic economic assets vital to the ability of the country to support and improve economic growth through industrial development and exports" (A Future for Roads in South Africa, 1996:7).

- **Provincial roads**

"The authorities primarily responsible are the provincial Departments of Transport and in some cases Public Works. Provincial roads are primarily provided for access and mobility in a regional context. These roads are designed for shorter travel distances and moderate speeds. Such roads usually form the links between towns not situated on the national road network" (A Future for Roads in South Africa, 1996:7).

- **Urban roads**

The authorities primarily responsible are city or local authorities. Urban roads are provided for mobility in urban areas.

"Although the provision of urban streets and roads is generally financed through local rates and taxes, the national and provincial road authorities do accept responsibility for certain national and provincial roads in urban and metropolitan areas to ensure route continuity. The Johannesburg outer ring road is such an example" (A Future for Roads in South Africa, 1996:9).

Classifying roads according to road user needs

"Roads satisfy various needs of the road user such as, for example, enhanced mobility. This they will do to a greater or lesser extent depending on their level of serviceability, which provides benefits of comfort, convenience, speed, safety and economy of travel. Many of the maintenance and upgrading activities performed within the roads budget are aimed at increasing serviceability. By far the greater part of the benefits that they produce will accrue exclusively to the road-using public. Accordingly, it must be questioned whether the general taxpaying public should be required to pay for such improvements from the State Revenue Fund" (A Future for Roads in South Africa, 1996:22).

Other needs, *inter alia* include, firstly, that like other forms of government activity in a market-oriented mixed economy such as South Africa's, roads must be economically efficient. This requires that the scarce resources available for roads must be allocated to satisfy the greatest demands. This requires road provision to be sensitive to market signals.

"Road provision must also be equitable. There are a number of facets to this

requirement. It may be more expensive to build and maintain roads under particular climatic or topographical conditions than others, so that regions exhibiting difficult conditions may warrant subsidisation by others more fortunately placed. Economically disadvantaged regions of the country may need to receive special development efforts. Furthermore, a balance must be maintained between the provision of roads and the supply of public transport. This is so that the disadvantages experienced by social groups without regular access to private motor vehicles are not exacerbated" (A Future for Roads in South Africa, 1996:22).

Finally, road provision must satisfy certain strategic requirements, for example, access to certain development regions must be secured, and the quality of life in rural areas improved in order to prevent their depopulation.

There is a trade off between these goals and different groups within society at large may be held to be responsible for providing the funds needed for their satisfaction.

"In particular, the user pays approach to funding is appropriate to the goals of economic efficiency and increased serviceability required by the higher order roads, such as the national road network. By contrast, the goal of equity and provision of basic access implies that some users at least are not able to pay. Funding out of general tax revenue is thus required to satisfy this goal, as well as that of meeting strategic objectives where the road-using public is not the beneficiary. Finally, user charging might need to be combined with subsidisation out of general revenue in order to satisfy the goal of environmental compatibility" (A Future for Roads in South Africa, 1996:22).

Road funding is a heterogeneous activity. Different road maintenance and improvement activities will satisfy different needs, and only in some cases will significant advantages accrue to the public at large. In other cases, benefits are experienced exclusively by road users, and can and should be "sold" to them like any other commodity.

Policy implications

The road network in South Africa faces a crisis. For many years now financial allocations from the Exchequer have been inadequate to meet the recurring needs of necessary maintenance, let alone provide much needed rehabilitation, improvement and expansion of the network to cater for the rapidly growing demands on the network.

"The main provisions to address the undesirable situation in respect of the road network are institutional and financial. They relate to the institutional framework within which the national road network is managed; an inadequate flow of funds; inadequate conditions of employment to attract sufficient numbers of experienced road engineers and technicians; lack of clearly defined responsibilities; inadequate management systems; and a lack of managerial authority and accountability. Roads are managed like a bureaucracy, not a business. Managers simply do not have the funds or incentives to use resources efficiently - nor are they penalised for poor performance" (A Future for Roads in South Africa, 1996:33).

Solving these problems requires fundamental changes in the way governments manage, and especially finance their networks, particularly the national networks that are provided primarily for economic reasons.

"The key concept for this level of roads which is emerging in many countries throughout the world is commercialisation, that is bringing the higher order roads into the market place, putting them on a fee-for-service basis and managing them like any other business enterprise. However since roads are a public monopoly, and likely to remain in government hands, commercialisation requires complementary reforms in other areas" (A Future for Roads in South Africa, 1996:33).

Such reforms include

- involving the road user in the management of roads to win public support for more road funding, to control potential monopoly power and to constrain road funding to what is affordable;
- establishing a clear organisational structure to place the delivery of the national road programme outside the hands of the bureaucracy;
- securing an adequate and stable flow of funds and introducing secure arrangements to channel these funds to the road agency, and
- strengthening the management of roads by providing effective systems and procedures and strengthening managerial accountability.

"There is a strong case for the re-introduction of a dedicated fund for the national road system. The income to the fund needs to be generated by a levy on fuel as well as loan funds, redeemed by road tolls. For the provincial and urban roads, where a significant increase in funding levels is also urgent, it appears appropriate that the financial sources should comprise vehicle licences (greatly increased in magnitude) and annual appropriations from the Exchequer" (A Future for Roads in South Africa, 1996:33).

7.6.1 Accessibility to road infrastructure

A number of important national roads traverse the Northern Cape. The N12 is an alternative route to the N1 from Gauteng to the Western Cape. The N12 south runs via Kimberley and joins the N1 at Three Sisters. Major east-west routes are the N14 from Wolmaranstad through Kuruman and Upington. The N8 links Upington to Springbok, while the N10 links Upington to Port Elizabeth. The N7 from Cape Town to Namibia is also an important route through the area.

The Namakwari Route is being marketed as an alternative route linking Gauteng and the Western Cape via Upington. It is almost the same distance as the N1 route between these two major centres and the roads are in good condition and uncongested.

The map shows that the provincial road network is extensive and well distributed across the province with a total of 66 372 kilometres of proclaimed roads. Only 5 768 kilometres of these are tarred roads, mostly main roads linking the major urban centres. The remaining 60 604 kilometres, over 90% of the proclaimed roads in the province, are all gravel roads.

There are more tarred roads in the northern areas of the province, reflecting the

population distribution and economic activity. The more isolated areas of the North West and Upper Karoo are especially poorly served by tarred roads. The most isolated areas depend on unscheduled roads and tracks that are not maintained by any of the roads authorities. Many rural communities are without access by proclaimed road.

According to Cole Consulting and Setplan (1995), poor road conditions impact negatively on attracting tourists to the Northern Cape for eco- and geotourism. Road maintenance and construction was identified by the Department of Public Works as a major contributor to job creation and the involvement of emerging contractors. However, no major construction programmes were being planned and the focus was on maintaining the current infrastructure.

Transport is mainly the concern of the province as it is responsible for almost all road issues except the construction of national routes. The 1995 survey found that the provincial Department of Transport had two district road engineers in Kimberley and Prieska. The Kimberley office was responsible for the Diamond Field and Kalahari regions; Prieska for a very large area encompassing the Upper Karoo, North West and Namaqualand regions. Being responsible for all roads in the province, the resources of the provincial department were stretched with only two roads engineers. It was likely that a further district roads engineer would be based in Upington.

The two road engineers were responsible for roads teams distributed across their regions to maintain the surfaced trunk roads. These teams undertook the resealing of tarred roads, did heavy maintenance and reacted to emergencies such as floods. All other road maintenance was undertaken by the Regional Services Councils (RSCs) on an agency basis for the provincial department. Road teams under the RSCs worked mostly on gravel roads. They were distributed across the RSC areas and undertook road maintenance. Proclaimed roads in towns were the responsibility of the municipality, the provincial department providing an 80% subsidy for maintenance and construction. Municipalities often contracted RSCs to assist with maintenance in their areas.

The provincial Department of Transport had identified a major need for a planning department. In the past roads construction and maintenance had focused on through roads and urban areas. However, there was likely to be a change in emphasis on roads in rural areas to meet social needs and serve disadvantaged communities. The following areas were likely to receive attention:

- Improvement of roads in the Orange Valley
- Informal settlements to be considered for the proclaiming of roads and their upgrading; a local access roads study to be undertaken
- Isolated settlements in the north of the province in the areas between Kuruman and the Gemsbok Park to be considered for road improvements
- Upgrading of the road to the Namibia border from Upington to be considered

As soon as a planning section had been established in the provincial department a thorough survey would be undertaken to identify and prioritise roads projects in the province.

Cole Consulting and Setplan

MAP 20 : LENGTH OF ROADS PER SQUARE KILOMETRE

Source : Surveyor General

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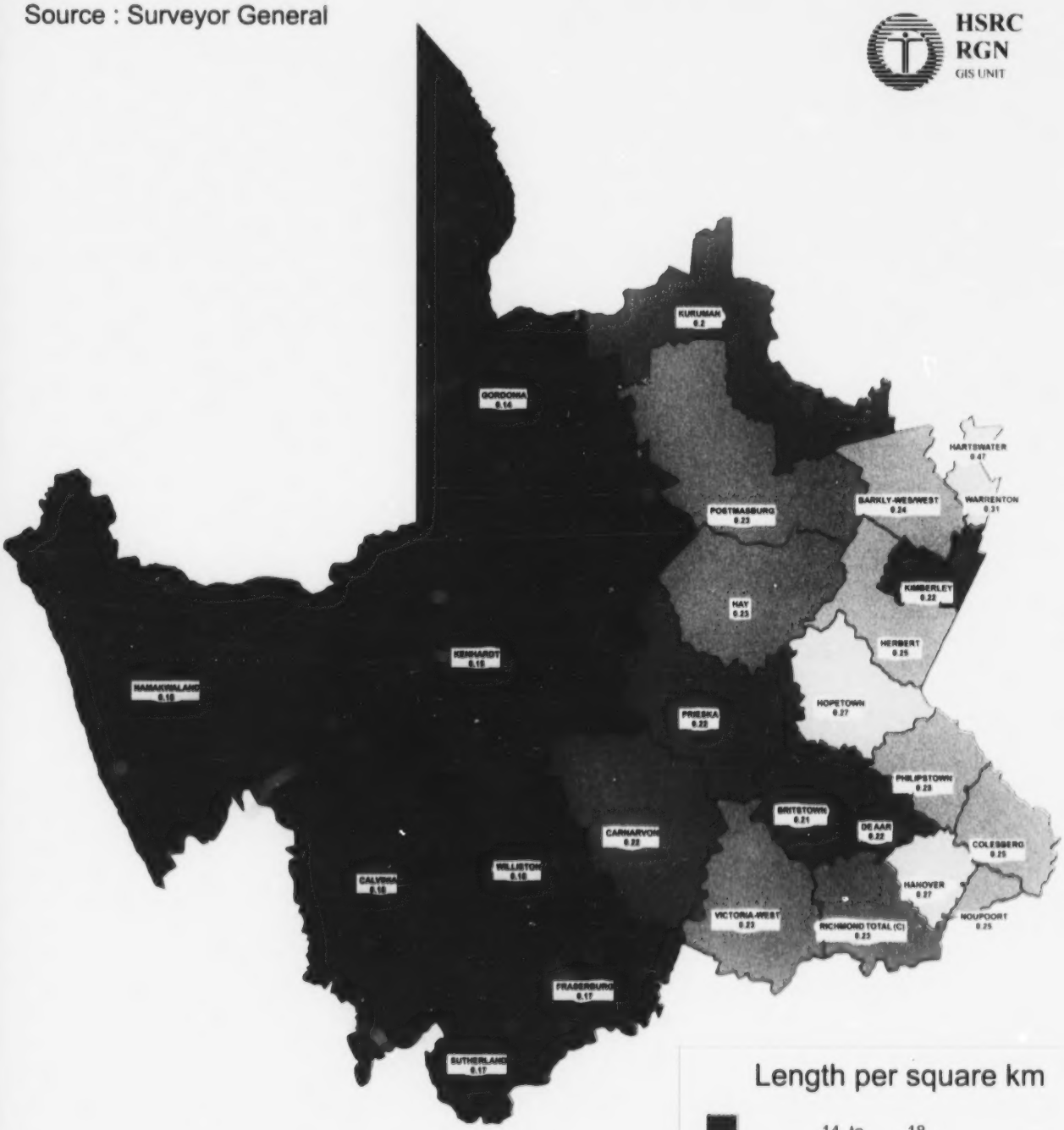

Length per square km

	.14 to .18
	.18 to .22
	.22 to .23
	.23 to .25
	.25 to .47

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Table 20 Length of roads per square kilometre

DISTRICT	LENGTH OF MAJOR ROADS	AREA (KM²)	LENGTH PER KM²
Barkly West	1 605	6 824	0,24
Britstown	1 540	7 320	0,21
Calvinia	6 704	37 730	0,18
Carnarvon	3 494	15 937	0,22
Colesberg	1 321	5 369	0,25
De Aar	708	3 211	0,22
Fraserburg	2 019	11 588	0,17
Gordonia	7 968	55 520	0,14
Hanover	1 010	3 699	0,27
Hartswater	349	736	0,47
Hay	2 919	12 820	0,23
Herbert	1 928	7 600	0,25
Hopetown	2 250	8 322	0,27
Kenhardt	5 710	37 048	0,15
Kimberley	772	3 566	0,22
Kuruman	3 487	17 563	0,20
Namaqualand	8 874	48 347	0,18
Noupoort	360	1 463	0,25
Philipstown	1 370	5 525	0,25
Postmasburg	4 453	19 233	0,23
Prieska	3 134	14 148	0,22
Richmond (C)	1 652	7 203	0,23
Sutherland	1 519	8 937	0,17
Victoria West	2 645	11 536	0,23
Warrenton	492	1 582	0,31
Williston	2 386	13 372	0,18

7.7 Telecommunications

Introduction

The sections dealing with the government's vision, the RDP, economic growth and empowerment and economic empowerment of historically disadvantaged South Africans has been abridged from the second draft of the White Paper on Telecommunications Policy, 1996. The analysis of residential line provision in the Northern Cape, was conducted by the HSRC.

The state's vision for the telecommunications sector

The state recognises the central importance of access to telecommunications to the achievement of its economic and social goals. Affordable communications for all, citizens and business alike, throughout South Africa, is at the core of its vision and is the goal of its policy.

The challenge is to articulate a vision that balances the provision of a basic universal services to disadvantaged rural and urban communities with the delivery of high-level services capable of meeting the needs of a growing South African economy.

The vision must therefore reconcile these two seeming opposites within an integrating framework that also allows for a dynamic definition of universal service and facilitates the co-ordination of all available infrastructure in support of its goal.

The RDP

"The telecommunications sector is key to the success of the RDP. Access to communications facilities is not only necessary for the delivery of services in critical sectors such as education and health; it also serves to stimulate the creation of small business and offers a channel of communication to reinforce participation in democratic processes at community, provincial and national levels. It is the essential backbone for development and offers the only opportunity for leapfrogging its relatively slow sequential phases" (White Paper, 1996:17).

Economic growth and empowerment

The telecommunications sector is both a source of economic growth and an enabler of growth in other sectors.

As a source of economic growth the sector itself offers opportunities for locally developed innovative products and services which, with appropriate transfers of skills and technologies, can contribute significantly to economic empowerment of previously disadvantaged communities. The sector can make an important contribution to export growth and import substitution.

As an enabler of growth the sector forms part of the basic infrastructure needed to stimulate economic activity including the creation and development of business in all sectors and therefore the growth of the economy as a whole. An integrated high-quality network providing value-added services and access to the international

information highway is required to support the needs of South Africa's internationally competitive industries and link its economy into the global system. Improved communication with the African region will reinforce South Africa's presence by facilitating exchanges among institutions in the public and private sectors and by providing opportunities for technology exports.

Because of the fundamental importance of the telecommunications sector to national economic growth and development, planning for the sector should be closely integrated into broad economic, trade and social planning and effectively linked with other information policy initiatives.

Economic empowerment of historically disadvantaged South Africans

"Political empowerment of the majority through democratic processes underway in the country must be accompanied by economic empowerment in order to achieve the national goal of sustainable social and economic development. The creation of meaningful jobs, wealth and a decent standard of living for the population will give meaning to their right to vote. Thus, political power cannot bring stability and growth without addressing the issue of historical disparities within the economic power. Besides referring to those who were disadvantaged by the apartheid system in the past, the term 'disadvantaged' also applies to those South Africans who have been historically disadvantaged through discrimination on the grounds of gender and/or disability. In the context of telecommunications the severe disadvantage experienced by members of rural communities under apartheid should receive special attention.

"Economic empowerment of historically disadvantaged communities is a deliberate programme of achieving meaningful participation by all members of these communities in all aspects of productive economic activities in South Africa as consumers, workers, managers and owners. Achievement of sustainable economic empowerment for historically disadvantaged communities will require a deliberate long-term phased programme utilising a wide spectrum of approaches. These will include the extension of telecommunications services to all; broadening the equity ownership of current and future enterprises (subject to the state assets debate); creating opportunities for meaningful employment and management; and the effective promotion of entrepreneurship. The effectiveness of any of these aspects and the success of the overall programme of economic empowerment will be rooted in the principle of a broad-based and non-discriminatory involvement of all communities in the economic development of South Africa. Human resource development within the telecommunications sector also needs to be seen as a form of economic empowerment to enable disadvantaged South Africans to participate in the industry effectively" (White Paper, 1996:40).

7.7.1 Residential line shares

The data relating to the Northern Cape were analysed in terms of residential line supply only. During the time of writing Telkom was sensitive about the public release of actual numbers of residential lines per magisterial district. This was due to uncertainty regarding the future restructuring of Telkom and the possible utilisation of

data by competitors. The 1996 Census will however place this data in the public domain.

To accommodate Telkom's sensitivities residential line data were transformed to indicate the priority of the various districts. Very high priority districts are those districts that are currently well below the provincial average. The other priority ranges are high, medium, low and very low. The very low priority districts have a residential line penetration that is much greater than the provincial average.

All the districts within the Northern Cape were formerly part of the white Cape Province of the old South Africa. According to the map, the pattern of provision shows that the diamond mining and railway junction districts of Kimberley and De Aar are well provided for. The districts adjacent to Kimberly are not well provided for. This implies that the development in Kimberley has not had a beneficial effect on the local economy. Had this been the case both the demand for telephones and the ability to pay for the service would have increased. De Aar is well provided for, but the adjacent areas, except for Philipstown and Colesburg in the east, are poorly provided for.

In general the province shows a concentration of both well and poorly provided for areas along its eastern border. This uneven development is a matter of concern. The central and western regions around Calvinia show a more consistent spatial gradation from very low to low and medium priority districts.

If the telecommunications sector is to be a growth sector in itself and a means by which other sectors can develop, then a long-term strategy concomitantly to supply universal access to historically disadvantaged rural and urban communities and also to form part of infrastructure vital to a developing economy is required. Telkom's Vision 2000 strategy hopes to increase the number of subscribers by 2-3 million. This will only be possible if a strategic equity partner (SEP) is found for Telkom. This will allow the rate at which new services are provided to treble. The South African government is Telkom's main shareholder and will have overseen the appointment of an SEP perhaps by March, 1997.

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MAP 21 : TELECOMMUNICATIONS PRIORITIES

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Source : Telkom 1995

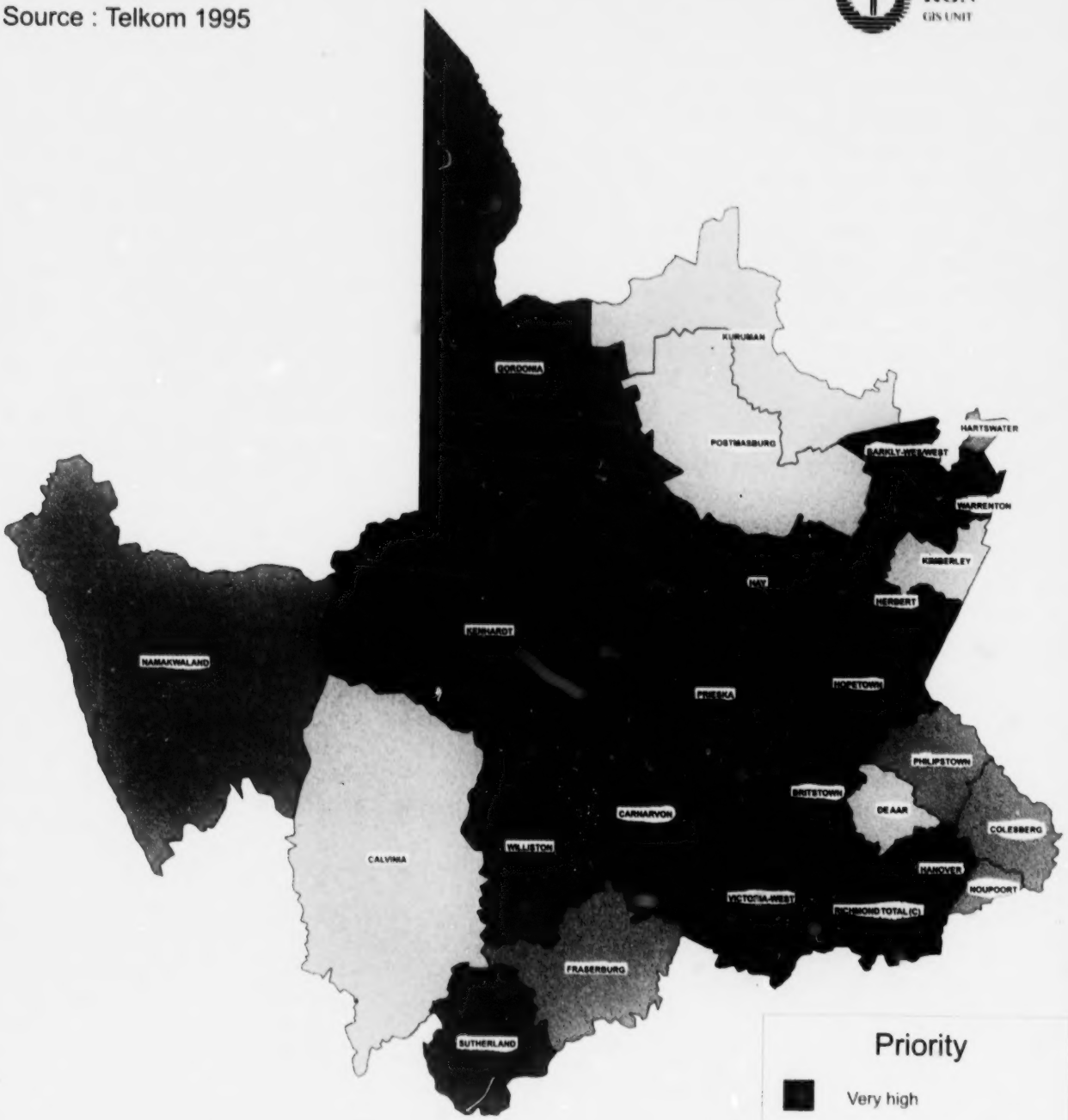

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Table 21 Telecommunications priorities

DISTRICT	PRIORITY	RANK
Hopetown	Very high	1
Richmond (C)	Very high	2
Barkly West	Very high	3
Hay	Very high	4
Victoria West	Very high	5
Warrenton	High	6
Britstown	High	7
Herbert	High	8
Hanover	High	9
Kenhardt	High	10
Sutherland	Medium	11
Prieska	Medium	12
Williston	Medium	13
Carnarvon	Medium	14
Gordonia	Medium	15
Colesberg	Low	16
Philipstown	Low	17
Fraserburg	Low	18
Noupoort	Low	19
Hartswater	Low	20
Namaqualand	Low	21
Postmasburg	Very low	22
Calvinia	Very low	23
De Aar	Very low	24
Kuruman	Very low	25
Kimberley	Very low	26

7.8 Postal services

The South African Post Office

The company

"The South African Post Office is an independent public company, fully complying with the regulations laid down in the Companies Act. The State is the sole shareholder. Parliamentary control has been replaced by a Board of Directors, consisting of respected business and community leaders from outside the company, and a Management Board, headed by a Managing Director. The Post Office aims at profit-making. Financial accounts and statements are compiled in terms of the Companies Act, taxes are paid on any profits and the current shortfall is subsidised by the State" (SA Post Office, 1993:4).

The main activities

"The Post Office is responsible for the handling and delivery of an average of 7,7 million mail items each working day, counter services at more than 1 600 post offices countrywide and the Post Office Savings Bank, now known as the Postbank" (SA Post Office, 1993:4).

The Post Office also acts as an agent for a number of private and public organisations such as Telkom SA for the collection of telephone account payments and the SABC for the collection of television licence fees. Similarly, the paying of pensions, the selling of scratch cards, and the collecting of water and electricity account payments for certain municipalities, as well as the selling of revenue stamps is handled by the Post Office (SA Post Office, 1993).

Reshaping the postal services

In 1993, the Post Office embarked on a programme to streamline the postal business to ensure a quicker, more effective service and to put clients first. This entailed the following:

- **Placing basic postal services within easy reach**

Since May 1993, postage stamps have been available at certain local bookshops, supermarkets, chemists, cafe's, spaza shops and filling stations. One-stop shopping was introduced by selling postage-paid envelopes, easy-to-use packaging and other articles needed to facilitate the mail service for clients. A larger variety of such services and products were introduced with the opening of postal shops in 1994/95. A single-queue system was introduced at most of the major post offices to enable clients to do all their postal business, including banking business, at the same counter (SA Post Office, 1993:4).

- **Creating an infrastructure to suit the entire community**

It is Post Office policy to take the post office to the clients. For this reason, more post offices will be opened in shopping centres and inside existing host undertakings. This will make it easier for clients to do their postal business together with other business, even during extended office hours. The first retail postal agencies were to be

introduced in 1994/95 (SA Post Office, 1993:4).

- **Giving each person a postal address**

"A massive three million additional postboxes, mainly in the form of transportable mail collection units or postbox lobbies, are to be placed all over South Africa within the next five years to enable each household to receive mail. The focus will be on underdeveloped areas where no postal delivery service exists. This entails clients collecting their own mail at postbox lobbies placed at convenient places after negotiation with communities. The other mail delivery options available include private postboxes, fixed poste restante (transportable postbox lobbies) and street delivery" (SA Post Office, 1993:5).

- **Delivering mail according to set standards**

In April 1993, the Post Office introduced set mail delivery times. This entails delivery within two days in the same town or city, four days between towns and cities in the same province and between major centres in different provinces and five days to more remote places for inland standard economy mail. An additional day should be allowed for non-standardised and insured/registered or COD items. The day on which the letter is posted should not be taken into account. The Post Office's performance is measured against these set standards by external auditors and the Post Office is held publicly accountable to its clients (SA Post Office, 1993).

- **Creating a computer network to facilitate counter services**

In 1994 the Post Office started to expand its computer network to link 5 000 counter service points countrywide. The system, known as Excellpos, will reduce paperwork to a minimum, expedite service at the counter and cut the waiting time in queues considerably (SA Post Office, 1993).

Inland mail service

Three mail services are available: Economy mail, Fastmail and Speed Services.

Economy mail

Economy mail is the ordinary mail service in South Africa. The new standard postage stamp without face value may be used on all inland standard letters. Should it be used on non-standard items and overseas mail, additional postage stamps must be affixed (SA Post Office, 1993).

Fastmail

Fastmail undertakes to deliver items at least one day earlier than Economy mail in terms of the set delivery times. Fastmail comprises any standardised or non-standardised letter to a maximum of two kilograms, which must be handed in at a post office counter. Clients may use the Fastmail envelopes on sale at post offices or use their own envelopes. Stickers have been specially designed to ensure the item receives priority treatment throughout the mail handling process (SA Post Office, 1993).

Speed Services

An extension of the priority mail service, Speed Services provide the following options to get urgent mail items to their destinations in the shortest possible time:

- same-day delivery
- overnight delivery
- international speed delivery

To make it even more convenient, clients may choose from

- counter-to-counter delivery
- counter-to-door delivery
- door-to-counter delivery
- door-to-door delivery

Speed Services guarantees delivery times and will compensate losses. Speed Services is also able to trace mail items at any given time (SA Post Office, 1993).

7.8.1 Accessibility to postal services

According to a survey undertaken by Cole Consulting and Setplan (1995), the Post Office was divided into four administrative areas which covered the province and were controlled by head post offices in Kimberley, Upington, De Aar and Springbok. Namaqualand was still administered from Cape Town although this was to change in the near future.

Payment of pensions remains an important social function of the Post Office that is undertaken in all areas. The payment of telephone accounts also remains an important function.

Basic postal services were relatively evenly spread across the province. The standard of postal deliveries was similar in all four areas. Given the sparse population of the Upper Karoo, North West and Namaqualand, this meant that postal communication was actually used far more by individuals and was therefore quite important in the three relatively isolated regions.

Non-basic services, such as insured and registered articles and Speed Services were used more in the Kimberley area than in the other areas, reflecting the concentration of economic activity in this area.

The postal infrastructure in the Northern Cape was found to be good. There were no plans to erect new post offices but rather to upgrade existing post offices, such as Galeshewe and Mankuruwane. The Post Office's policy then was not to expand street delivery but to concentrate on the expansion of services to disadvantaged and isolated communities. A variety of approaches were being used.

Mobile address boxes were being established in disadvantaged urban areas for which the users paid a R15 deposit but use was free of charge. These units were proving very popular. The boxes were sited in negotiation with TLCs and were then mostly sited around Kimberley.

An adaptation of the address box was a container that was half an address box and half a spaza shop, with the shop holder running the postal service and the shop

together. There were none of these units in the province at that time but one was planned for Kimberley.

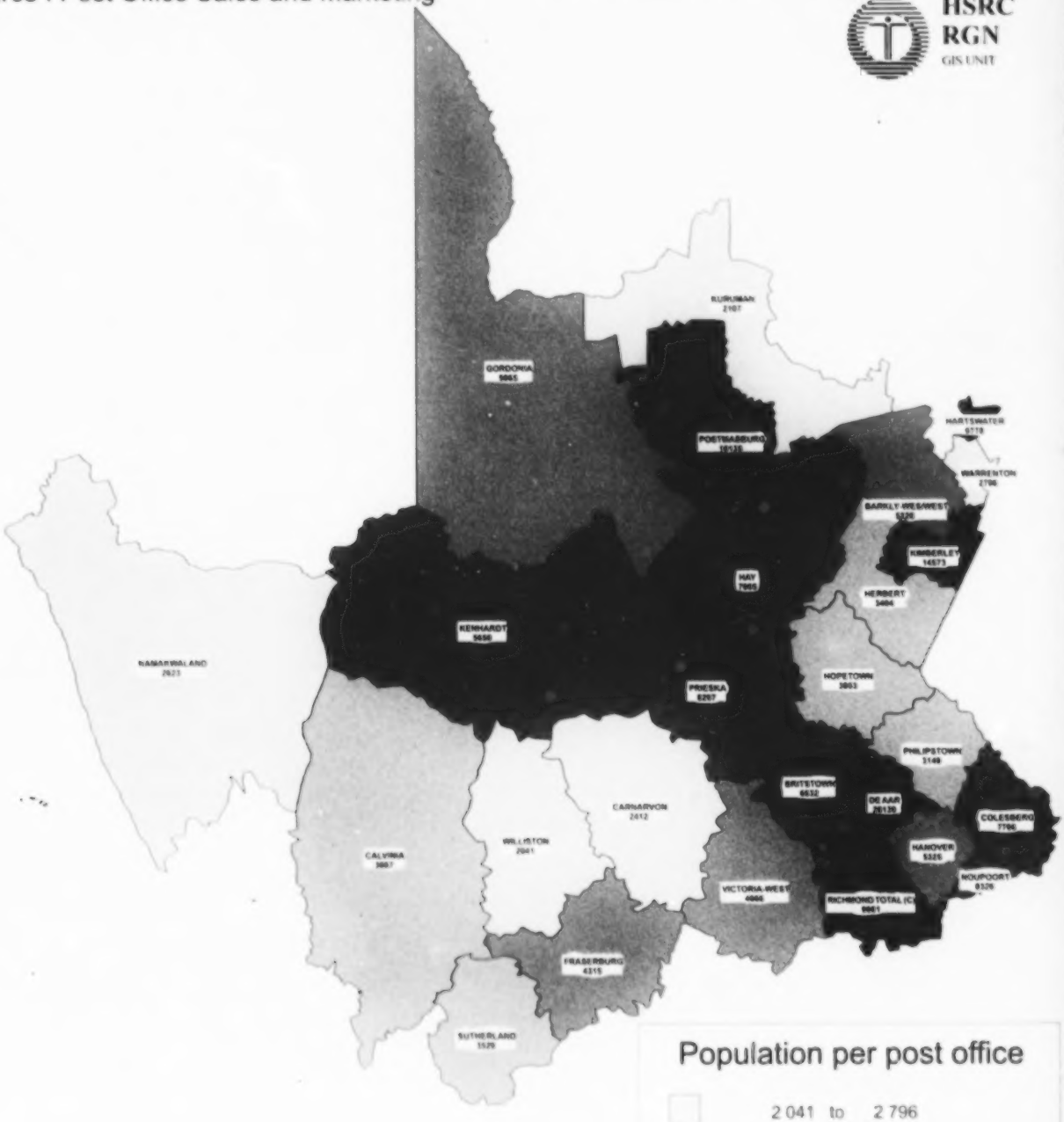
The Post Office planned to increase the number of retail post offices (a post office sited in a shop on an agency basis) to service the rural areas more cost effectively. No permanently staffed post offices would be closed unless an alternative method of service delivery was put in place.

Cole Consulting and Setplan

MAP 22 : POPULATION PER POST OFFICE AND POSTAL AGENCY

Source : Post Office Sales and Marketing

HSRC
RGN
GIS UNIT



Population per post office

2 041	to 2 796
2 796	to 3 853
3 853	to 5 325
5 325	to 8 326
8 326	to 26 139

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Table 22 Population per post office and postal agency

DISTRICT	POSTAL OFFICES AND POSTAL AGENCIES	TOTAL POPULATION	POPULATION PER POSTAL FACILITY
Barkly West	7	36 593	5 228
Britstown	1	6 532	6 532
Calvinia	6	21 999	3 667
Carnarvon	4	9 649	2 412
Colesberg	2	15 411	7 706
De Aar	1	26 139	26 139
Fraserburg	1	4 315	4 315
Gordonia	26	131 702	5 065
Hanover	1	5 325	5 325
Hartswater	3	29 334	9 778
Hay	2	14 010	7 005
Herbert	8	27 233	3 404
Hopetown	4	15 412	3 853
Kenhardt	2	11 300	5 650
Kimberley	12	174 880	14 573
Kuruman	12	25 287	2 107
Namaqualand	30	78 700	2 623
Noupoort	1	8 326	8 326
Philipstown	3	9 448	3 149
Postmasburg	6	60 811	10 135
Prieska	3	24 890	8 297
Richmond (C)	1	9 081	9 081
Sutherland	1	3 529	3 529
Victoria West	3	13 998	4 666
Warrenton	8	22 371	2 796
Williston	2	4 082	2 041

7.9 Police services

SAPS mission and goals

General overview

Policing in South Africa has traditionally not developed as a service aimed at meeting the needs and aspirations of our diverse communities. Policing was rather the appropriation and domination by particular governments to enforce specific political ideologies that were inconsistent with the democratic and popular aspirations and demands of the majority of people in South Africa.

The April 1994 elections ushered in a democracy that completely redefined the political and social context within which policing in South Africa is to function. "The advent of democracy demands a fundamental reassessment and transformation of the nature and style of policing. The Constitution prescribes the establishment of a national Police Service that is to be representative, legitimate, impartial, transparent and accountable - one which upholds and protects the fundamental rights of all people and carries out its mission in consultation, co-operation, and in accordance with the needs of the check community" (SAPS: Website, 1996).

Transformation of the South African Police Service

The transformation process of the South African Police Service is aimed at "meeting the requirements of the Constitution, the policies of the Government of National Unity and the very urgent need for the creation of a safe and secure environment for all citizens in our country that is conducive to development and quality of life. Indeed the prevailing climate of change in South Africa presents a golden opportunity to address a range of issues relevant to democratic policing" (SAPS: Website, 1996).

The Reconstruction and Development Programme and the South African Police Service

There are five interlinking or interdependent programmes that support the transformation process. As the current budget does not allow for this change, assistance has been sought from the RDP fund and official donor assistance to make change possible. Such assistance will be required for the short term only (two to three years), until the South African Police Service budget can be redirected to support RDP principles. The five programmes are: the Community Policing Programme; the Information Management Programme; the Victim Support Programme; the Human Resource Development Programme and the Infrastructure Development Programme. These programmes will act as leverage and will phase in the underlying objectives of the transformation process over the stated period (SAPS: Website, 1996).

To provide effective policing, the SAPS and the RDP have established two policing plans: the "Shield and Sword Plan" and "Community Policing".

Shield and sword

The increasing stranglehold (both physical and psychological) of crime on South Africa must be broken immediately if our democracy and economy are to survive and prosper. The firmest and most decisive action must be taken against crime immediately to prevent South Africa from plunging into the abyss of becoming yet another anarchic country. The eyes of South Africa and indeed the entire world are now on the SAPS to take the lead in the war against crime. The organisational framework within which crime will be fought and beaten is the annual police plan required by parliament. Each police plan is a campaign in the war against crime, to be fought and won within the context of the government's recently announced National Crime Prevention Strategy (NCPS) (*Servamus*, 1996).

Police plan 1996-1997

"The Police Plan for 1996/1997 is the first of its kind. It is a no-nonsense 'back-to-basics' policing plan aimed at crushing crime wherever it is encountered. It is also a radical reassessment and reorganisation of policing at grassroots level in South Africa. Operationally, the heart of the police plan is a 'Sword and Shield' approach where the SAPS takes the offensive by hunting down criminals everywhere, while preventing crime by systematically reclaiming streets and rural areas from criminals. The SAPS will take the initiative from the criminals by turning them, and not law-abiding citizens, into the prey. The 'Sword and Shield' approach will simultaneously break the psychological and physical grip of crime and systematically reduce the operational capacity of criminals. Both serious and so-called 'petty crimes' will automatically fall within its ambit to turn the tide against criminals, thereby establishing a culture of respect for the law" (*Servamus*, 1996).

The following will be implemented with the "Sword and Shield" approach:

Sword

The "Sword" refers to the mobile striking force of the SAPS by which specialised SAPS units dealing mainly, but not exclusively, with crimes prioritised in the police plan will relentlessly hunt identified criminals, day and night. These categories include, hijacking and other vehicle-related crimes, gang-related crimes; taxi violence, possession of and trafficking in illegal weapons, narcotics-related offences, declared political massacres and robberies. "For this purpose 42 additional SAPS Task Forces have been set up to relentlessly hunt identified suspects, over and above other units whose normal function is tracking criminals. Although 'Sword' unit operations will not be confined to specific areas and will criss-cross South Africa, special attention will be paid to Gauteng, KwaZulu-Natal and the Western Cape. Their first aim is to track down and arrest South Africa's 10 000 most wanted suspects - already identified - within 30 days of the launch of the police plan. They will then systematically hunt down other target groups as they are identified" (*Servamus*, 1996).

Shield

The "Shield" component of the plan will protect communities by reclaiming streets and rural areas and by deflecting cross-border and international crime. The SAPS will

aggressively establish control and dominate specific geographical areas to create a policing shield for communities. A major aspect is that of partnership policing in which the police form specific alliances with certain sectors, for example the business and agricultural sectors, shopkeepers, hawkers and the security industry. "Shield" will also feature hi-tech measures such as electronic and camera surveillance of certain CBD areas in South Africa (*Servamus*:1996).

Furthermore, the idea of safety networks will be introduced, namely:

International Safety Network with Interpol to fight international crime such as fraud, counterfeit currency, gun smuggling, narcotics and money-laundering

Regional Southern Africa Safety Network with the police of Lesotho, Namibia. Angola, Zambia, Botswana, Malawi, Tanzania, Mozambique, Zimbabwe and Swaziland

Border Safety Network within South Africa itself, aimed at preventing cross-border criminal activity

Urban Safety Network to reclaim the streets from criminals

Rural Safety Networks, especially in KwaZulu-Natal, to combat political violence and rural crimes.

Parallel and ongoing measures to root out police corruption and improve discipline and service are also an integral part of the police plan. Naturally, the "Sword" and "Shield" components must be seen holistically as mutually supportive and co-ordinated. It is firmly believed that the 1996/97 Police Plan will make a decisive impact on South Africa's crime situation and so lay the foundation for eventually winning the war against crime. Ultimately, its success will depend on a supreme effort of will and commitment by all South Africans, but especially the SAPS and other organs of state in the justice system (*Servamus*:1996).

Community policing

Effective community policing embraces the active and willing contribution by the community to all aspects of police practices and procedures. "Such a co-operative endeavour, which stresses joint responsibility by citizens and police for community safety, requires a quantum leap in faith and trust between both parties" (Martin: SAPS Website, 1996).

Community policing has three basic premises:

- To work in mutual partnership with the community to protect life and property
- To solve neighbourhood problems
- To enhance the quality of life in our cities

The police, being the first line of defence in law enforcement, crime prevention, and public safety must be permitted to carry out these functions as they deem necessary. They cannot do this alone however, and in spite of community policing, the public

must become involved as the eyes and ears on the home front.

Methods of community policing

- Increasing foot and bicycle patrols
- Designating certain officers to specific areas of the city to increase familiarity between police and public
- Decentralising by placement of storefronts and neighbourhood offices in crisis areas of the city
- Developing sub-stations
- Forming alternative response teams comprising trained personnel such as nurses or social workers to work out of the storefronts
- Holding town hall meetings to gain community co-operation and to increase officers' involvement in extracurricular community activities such as teaching crime prevention and safety programmes.

If the public continues to be actively involved in law enforcement, crime prevention and public safety efforts, community policing will be a success (Martin: SAPS Website, 1996).

7.9.1 Accessibility to police services

Best or worst-off districts

The four police areas in the Northern Cape, namely the Diamond Fields, Namaqualand, Upper Karoo and Gordonia, have similar police facilities and all experience similar shortages. The building of two new police stations with RDP funds has been approved for Colesberg's black township and the coloured township in Calvinia.

Policy guidelines

The Northern Cape province has developed a redistribution of resources programme. According to this programme the area commissioners have to take stock of the resources in their areas such as vehicles, furniture, equipment, and personnel and decide whether the resources are equally distributed among the police facilities in their areas. If not they have to correct any imbalances. However, the shortage of personnel and finances and the vastness of the province has hampered the execution of the exercise.

Issues of relevance in meeting future service needs

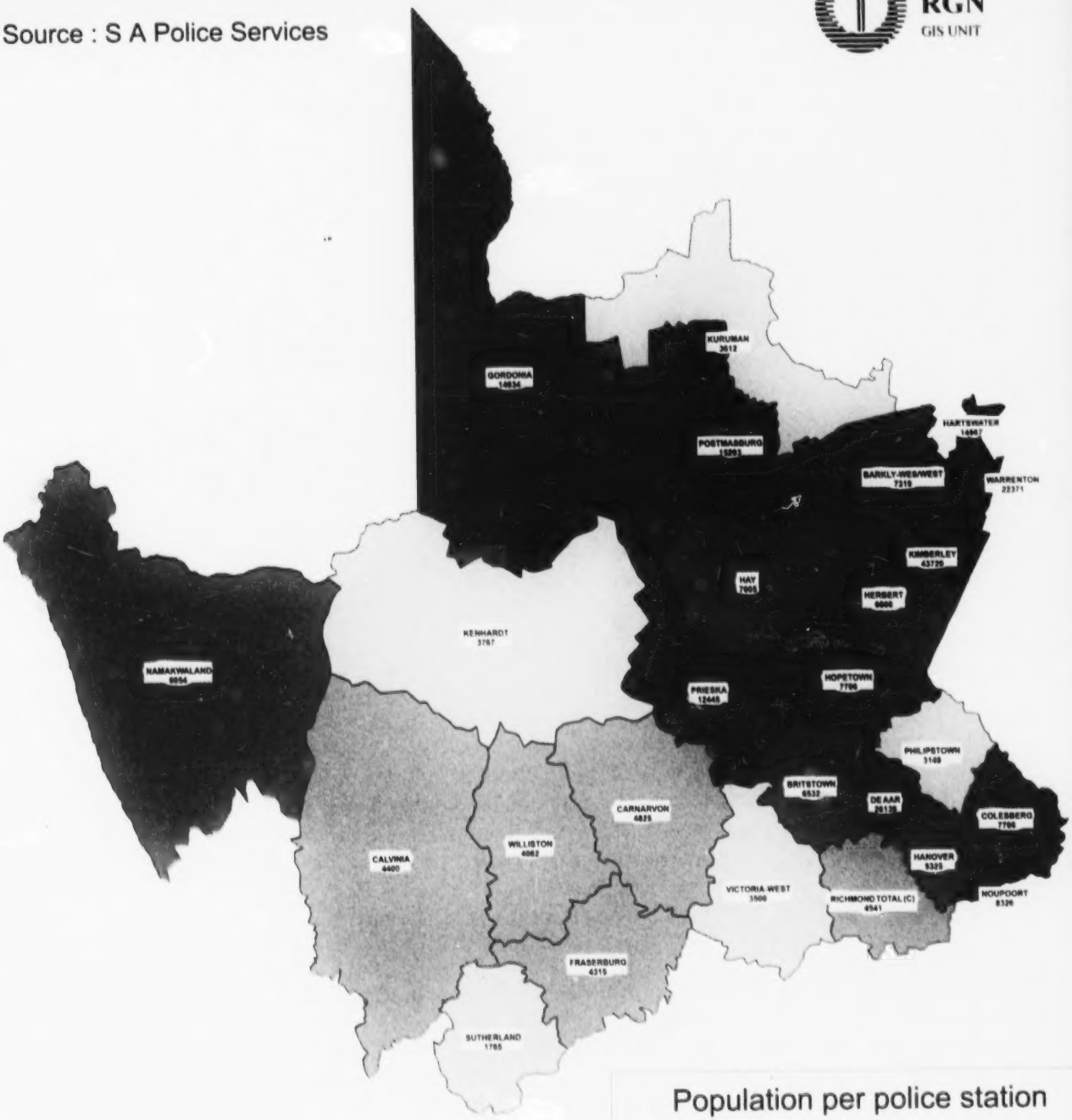
There are two issues of utmost importance for meeting future service needs. The first issue is the shortages of personnel. The SAPS in the Northern Cape is currently understaffed by 32,91%. Although the Northern Cape province has the lowest population in the country, it comprises 33% of the area of the country. The second major issue is the relationship between the SAPS and the community. The SAPS will have to earn the trust of the community by rendering a professional and trustworthy service. At present police facilities are not easily accessible to all communities. The SAPS is, however, investigating this situation.

J.P. Van Dyk
Snr. Supt. Naude
South African Police Service

MAP 23 : POPULATION PER POLICE STATION

HSRC
RGN
GIS UNIT

Source : S A Police Services



Population per police station

1 765	to	3 767
3 767	to	4 825
4 825	to	7 005
7 005	to	14 634
14 634	to	43 720

N

KM

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Table 23 Population per police station

DISTRICT	POLICE FACILITY	TOTAL POPULATION	POPULATION PER POLICE FACILITY
Barkly West	5	36 593	7 319
Britstown	1	6 532	6 532
Calvinia	5	21 999	4 400
Carnarvon	2	9 649	4 825
Colesberg	2	15 411	7 706
De Aar	1	26 139	26 139
Fraserburg	1	4 315	4 315
Gordonia	9	131 702	14 634
Hanover	1	5 325	5 325
Hartswater	2	29 334	14 667
Hay	2	14 010	7 005
Herbert	4	27 233	6 808
Hopetown	2	15 412	7 706
Kenhardt	3	11 300	3 767
Kimberley	4	174 880	43 720
Kuruman	7	25 287	3 612
Namaqualand	13	78 700	6 054
Noupoort	1	8 326	8 326
Philipstown	3	9 448	3 149
Postmasburg	4	60 811	15 203
Prieska	2	24 890	12 445
Richmond (C)	2	9 081	4 541
Sutherland	2	3 529	1 765
Victoria West	4	13 998	3 500
Warrenton	1	22 371	22 371
Williston	1	4 082	4 082

8

DISCUSSION: The overall picture

Service Needs Index

As discussed in Section 4.2 the service variables selected for the Service Needs Index were ratios of population to police stations, post offices and hospital beds; the ratio of road length to district area; the ratio of 6 to 17 year olds to schools; percentages of fully serviced houses, informal houses, formal houses electrified and informal houses electrified and telephone shares.

A district with a low service index score and not requiring development intervention would have the following service profile: low ratios of population to police stations, post offices and hospital beds; a high ratio of road length to district area; a low ratio of 6 to 17 year olds to schools; high percentages of fully serviced houses, formal houses electrified and informal houses electrified; high telephone shares, and a low percentage of informal houses. A district with a high index score requires development intervention and would have the following service profile: high ratios of population to police stations, post offices and hospital beds; a low ratio of road length to district area; a high ratio of 6 to 17 year olds to schools; low percentages of fully serviced houses, formal houses electrified and informal houses electrified; low telephone shares, and a high percentage of informal houses.

The Service Needs Index map indicates that the eastern, western and northern districts have lower levels of service provision than the southern districts of Victoria West, Carnavon, Williston, Fraserburg and Calvinia. Victoria West (38) has a far higher level of service provision than its immediate northern and eastern neighbours of Prieska (62), Britstown (60) and Richmond (63). Likewise Calvinia (35) is better serviced than Namaqualand (55) and Kenhardt (55), its northern and western neighbours.

In the east service provision ranges from average to poor. Kimberley (52) does not have a markedly higher level of service provision than its surrounding districts of Warrenton (58), Barclay West (66) and Herbert (62). Kuruman (46) is one of the few better serviced districts in the north and its neighbours have lower service levels of between 11 and 20 index points. Philipstown (44), in the south, is better serviced than its neighbours by 8 to 16 index points.

Combined Social and Service Index

The correlation coefficient (Pearsons) between socio-economic status and service provision is +0,43. This indicates a general trend firstly, for high levels of socio-economic status and service provision to be found in the same district and, secondly, for service levels to decrease should the level of socio-economic status decrease. However, the relatively low positive score indicates that there are some districts in which there are marked differences between levels of service provision and socio-

economic status. As correlations do not neccessarily indicate causality, it cannot be assumed that the provision of services alone will bring about high socio-economic status. Economic upliftment programmes will have to be implemented in conjunction with the removal of services backlogs.

There are six districts that have a difference of 15 points or more between the social and the service indices and in four cases these districts have a higher level of service provision than socio-economic status. Five of these districts are located in the south-east where the per capita poverty is highest and where the percentage of the black population is higher than average. The Gini co-efficient of inequality indicates that the black population has the lowest income level. These facts help to explain the low socio-economic status of these districts. The implications of this is either that the level of services provided to some poor communities in these districts is relatively high, or that the level of service is heavily skewed along racial lines. Further research as discussed in the conclusion could clarify these issues.

The overall impression gained from the map on the Combined Social and Service Index is that the northern and eastern districts have average to low levels in three key areas: socio-economic status, household services and public services. All of the above average districts, except Kuruman, are in the south. The greatest discrepancy occurs between Kuruman (43) and Barkly West (67). Kimberley's (55) southern and western neighbours have similar levels of provision, but to the north of Kimberley Barkly West (67) and Warrenton (68) are at an appreciably lower level.

The combined social and service indices show smaller differences between the better-developed southern cluster and its neighbours than the Service Index. The greatest difference in the south occurs between Carnarvon (43) and Prieska (60), and the least between Victoria West (46) and Britstown (52).

Summary of commentators' views

Only six districts have **populations** of more than 29 000, namely Kimberley, Hartswater, Barkly West, Postmasburg, Gordonia and Namaqualand. These districts account for nearly 65% of the population of the province. Kimberley itself accounts for 23% of the region's population. This can mainly be attributed to mining activities in the region of Kimberley, Barkly West, Postmasburg and Alexander Bay. Intensive agricultural activities next to the Orange River near Upington and the Vaal River near Hartswater contribute to the high population of the Gordonia and Hartswater districts. It is also evident that two-thirds (66%) of the people in the province are located in the north and north-eastern regions (this includes the following districts: Herbert, Kimberley, Warrenton, Hartswater, Postmasburg, Kuruman and Gordonia).The southern districts have lower populations mainly because the economies of these districts are based on agriculture and, more specifically stock farming.

Total **formal sector employment** shrank by 2,3% per annum from 1980 to 1991. In other words more than one in every five formal sector jobs was lost between 1980 and 1991. Formal employment in the province is heavily concentrated in the government which in 1991 provided 34,0% of all employment. The next two most important sectors were agriculture (22,3%) and mining (12,4%) respectively. These three sectors

provided nearly 70% of all formal sector employment in the province in 1991. The concentration of formal employment in the government and the two primary sectors reflect both the historic strength of these sectors and the relative weakness of the Northern Cape economy. Of the two primary sectors, mining is in long-term decline and employment in agriculture is vulnerable to climatic and market fluctuations. The overconcentration of formal employment in declining and vulnerable sectors has led to an absolute decline in formal sector employment which is a feature of the Northern Cape only and no other province. The absolute decline in formal employment is, however, of great concern and the lack of emerging sectors in the Northern Cape makes the problem of formal job creation particularly acute.

The **informal sector** has grown in importance in the Northern Cape as a result of the declining absorption capacity of the formal sector. Figures from the population censuses of 1980 and 1991 show strong growth in the informal sector. The number of informal sector workers increased from 17 894 to 46 304 and the proportion of the economically active participating in the informal sector rose significantly from 7,6% to 20,0% in the same period, as workers entered the informal sector in response to the lack of formal sector jobs. It is interesting to note the change in distribution of the informal sector between 1980 and 1991. In 1980 the proportion of the economically active participating in the informal sector varied from as low as 1,7% in De Aar to as high as 13,7% in Noupoort. By 1991 the range had narrowed considerably. The lowest participation of the economically active was 19,0% in Victoria West and the highest participation was 20,8% in Kuruman. Participation in the informal sector is now seen to be a province-wide phenomenon with little regional variation. Unemployment is undoubtedly rising in the Northern Cape as formal job opportunities decline. From 1980 to 1991 the numbers of people actively looking for work but not in employment rose from 17 894 to 46 304. This corresponded to a proportional increase of the economically active population from 6,8% to 16,7%.

The inhabitants of urban areas are often more **educated** than their rural counterparts. For example, only 12% of the Herbert rural population is literate, while 33% of the urban population is literate. This situation can be expected to recur throughout the rural areas, especially in areas with an agricultural base as agriculture is one of the few employers of illiterate adults. Districts with higher levels of literacy such as Kuruman, Postmasburg and Namaqualand are also districts which attract migrant workers. In-migration areas are education selective. Consequently, if higher education makes employment and resources more accessible, it will result in higher incomes and improved economic welfare.

Districts with a per capita **poverty** gap of over R500 are located in the southern and south-eastern parts of the Northern Cape province. Williston is the worst off district with a per capita poverty gap of R601. Other districts with a per capita poverty gap of over R500 are Sutherland (R570), Hanover (R541), Philipstown (R538), Fraserburg (R521), Richmond (R519), and Carnarvon, Kenhardt, and Colesberg (R508). The best off districts are in the northern, north-eastern and western parts of the Northern Cape. To the north, Postmasburg (R272), Gordonia (R333) and Kuruman (R338) have low per capita poverty gaps. Kimberley (R261) in the north-east has the lowest per capita poverty gap in the province. To the west, Namaqualand (R319) has a low per capita poverty gap.

The Northern Cape has the lowest **population density** of all the provinces. The four districts with the highest number of people per km² are Hartswater (40), Warrenton (14), Kimberley (47) and De Aar (8). These exceeded the average for the region of nearly 2 people per km² in 1991. The high densities can mainly be attributed to the relatively small sizes of these four districts coupled with the intensive agricultural activities in the Hartswater, Warrenton and Kimberley districts, as well as the mining activities around Kimberley. The high population density at De Aar is the result of a relatively small district and the fact that the town is a major railway junction in South Africa.

The **pupil:teacher ratio** is within the accepted standards of 1:35 for primary schools and 1:32 for secondary schools. The ratio at Northern Cape primary schools is 1:28 and 1:22 at secondary schools. There are no shortages of teachers on a provincial level. However, schools with teacher shortages are mostly rural farm schools and some schools in Kimberley.

The capacity of **medical** staff is stretched in some districts with district surgeons attending some 1 537 patients per month in Calvinia for instance. High ratios of persons per registered nursing staff are found in the districts of Barkly West, Britstown, Hanover and Herbert. A network of clinics service the municipalities and district areas. Mobile clinics service smaller settlements weekly or monthly, but some areas receive visits only every six weeks. The inaccessibility of outlying areas is a problem and although the mobile service does reach many of these areas, a six-weekly service may be inadequate. The distribution of beds per 1 000 persons in the province indicates that provision is better in the southern and eastern parts of the province than elsewhere. The North West, the Diamond Fields and Upper Karoo have 6, 5,1 and 4,1 beds per 1 000 people. Namaqualand and the Lower Orange regions have 3,8 and 3,7, respectively. The Kalahari region is the lowest of all at 1,2 beds per 1 000 people (Health Systems Trust, 1996). While the Kalahari has a very low ratio of beds to 1 000 people, it approaches optimum levels of bed occupancy at 64,3%. The Diamond Fields is at optimum bed occupancy rate at 77,5%, while the Upper Karoo, North West and Lower Orange are approaching underutilisation at 58%. Namaqualand is underutilised at 35,8%

Housing backlogs (more than 1 000 units needed) appear critical in Barkly West (1 060), the Lower Orange district (1 500), Colesberg (1 300), De Aar (1 536), Jan Kempdorp (1 112), Kimberley (23 200), Postmasburg (1 676), Upington (1 036) and Warrenton (2 300). Almost half the backlog is in Kimberley.

Different forms of housing and care provision are provided for **the aged** in the Northern Cape: there is sheltered housing which provides institutional provision for 10% of the whites (second highest in country), 0,2% of the black, 0,8% of the coloureds and zero for Indians. There are also community services centres which serve 3 400 whites, and 868 coloured, black or Indian elderly.

With regard to **water provision and sanitation** the following districts are a priority: Herbert, Barclay West Warrenton, Richmond Gordonia, Kuruman, Hopetown, Hartswater, Hanover and Namaqualand.

New **electrification** projects have been scheduled for implementation. Projects earmarked for 1995 were at Ikhutseng (Warrenton), Mataleng (Barkly West) and

Valspan (Jan Kempdorp), Bongani (Douglas), Buffelsrivier (Springbok), Kheis (Garies), Kotzeshoop (Vioolsdrif), Kuboes, Lambrechtsdrif (Groblershoop), Lenardsville, Okiep, Steinkopf (Springbok), Steynsville (Hopetown), Tweerivier (Garies) and Vioolsdrif.

The provincial **road network** is extensive and well distributed across the province with a total of 66 372 kilometres of proclaimed roads. Only 5 768 kilometres of these are tarred roads, mostly main roads linking the major urban centres. The remaining 60 604 kilometres, over 90% of the proclaimed roads in the province, are all gravel roads. The provincial Department of Transport identified a major need for a planning department. In the past roads construction and maintenance focused on through roads and urban areas. However, it is likely that there will be a change in emphasis to roads in rural areas to meet social needs and serve disadvantaged communities.

The pattern of **telephone** provision shows that the diamond mining and railway junction districts of Kimberley and De Aar are well provided for. However, the districts adjacent to Kimberley are not well provided for. This implies that the development in Kimberley has not had a beneficial effect on the local economy. De Aar is well provided for, but its adjacent districts, except for Philipstown and Colesburg in the east, are poorly provided for. In general the province shows a concentration of well and poorly provided for areas along its eastern border. This uneven development is a matter of concern. The central and western regions around Calvinia show a more consistent spatial gradation from very low to low and medium priority districts.

The **postal infrastructure** is good in the Northern Cape. There are no plans to erect new post offices, but rather to upgrade existing post offices, such as Galeshewe and Mankuruwane. The Post Office's current policy is not to expand street delivery, but to concentrate on the expansion of services to disadvantaged and isolated communities.

There are two issues of the utmost importance for meeting future **police** service needs. The first issue is the shortage of personnel. The SAPS in the Northern Cape is currently understaffed by 32,91%. Although the Northern Cape province has the lowest population in the country it covers 33% of the area of the country. The major second issue is the relationship between the SAPS and the community. The SAPS will have to earn the trust of the community by rendering a professional and trustworthy service. At present police facilities are not easily accessible to all communities. The SAPS is, however, investigating this situation.

Conclusion

The Northern Cape covers a large area and has a comparatively low population density. The population is concentrated in the north and north-east. It often happens that districts surrounding main urban centres, such as Kimberley and De Aar which already have high population pressure on services, have much lower levels of service provision. Some service providers are understaffed, yet have to cover vast areas in service of the public. Service provision in the past has been biased toward the white population. Future provision aims to reach previously disadvantaged communities and also communities in remote areas.

Formal sector employment declined by approximately 20% between 1980 and 1991 due to the decline in the mining sector and the vulnerability of agriculture. A significant rise in informal sector activity occurred throughout the province during this period. The highest levels of per capita poverty are found in the south and south-east. Job creation is a major issue as new sectors have not evolved to supplement the declining primary and secondary sectors.

Future research could monitor changes in service provision and socio-economic status. The main sources of data would be the 1996 Census, service providers and the RDP activities. The 1996 Census would allow the Social Needs Index to be updated, but for services would provide information on services provided to households only. Service providers and government departments could be the sources of information for the provision of public services. The most important facet of the 1996 Census is that information on household services will be available at an enumerator area (EA) level. As EAs are usually socio-economically homogenous, this will allow a rigorous analysis of the relationship between socio-economic status and service provision.

It is highly probable that as there is now a political will to provide services to and economically uplift previously disadvantaged communities, these communities should simultaneously experience improved socio-economic status and service provision. The process of creating an equitable society should be monitored by the above-mentioned research to provide insight into the rate of change in the spatial distribution of services and also socio-economic status. It is hoped that this document and future research will contribute to the process of uplifting the disadvantaged and thereby contribute to the creation of an equitable South African society.

B. O'Leary
Human Sciences Research Council

MAP 24 : SERVICE PROVISION INDEX

HSRC
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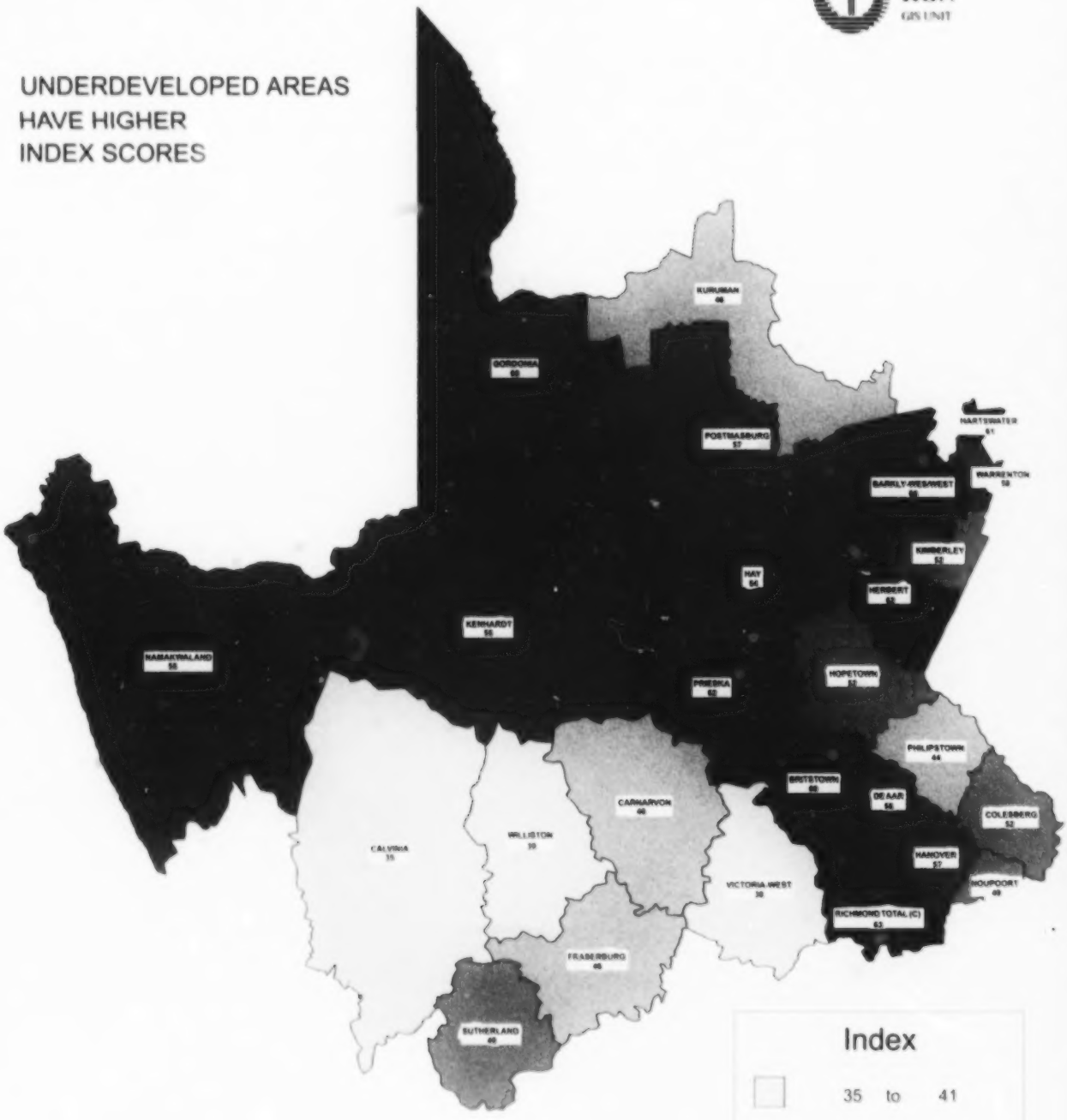
UNDERDEVELOPED AREAS
HAVE HIGHER
INDEX SCORES



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41	to	47
47	to	54
54	to	60
60	to	66

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MAP 25 : COMBINED SOCIAL NEEDS AND SERVICE PROVISION INDEX

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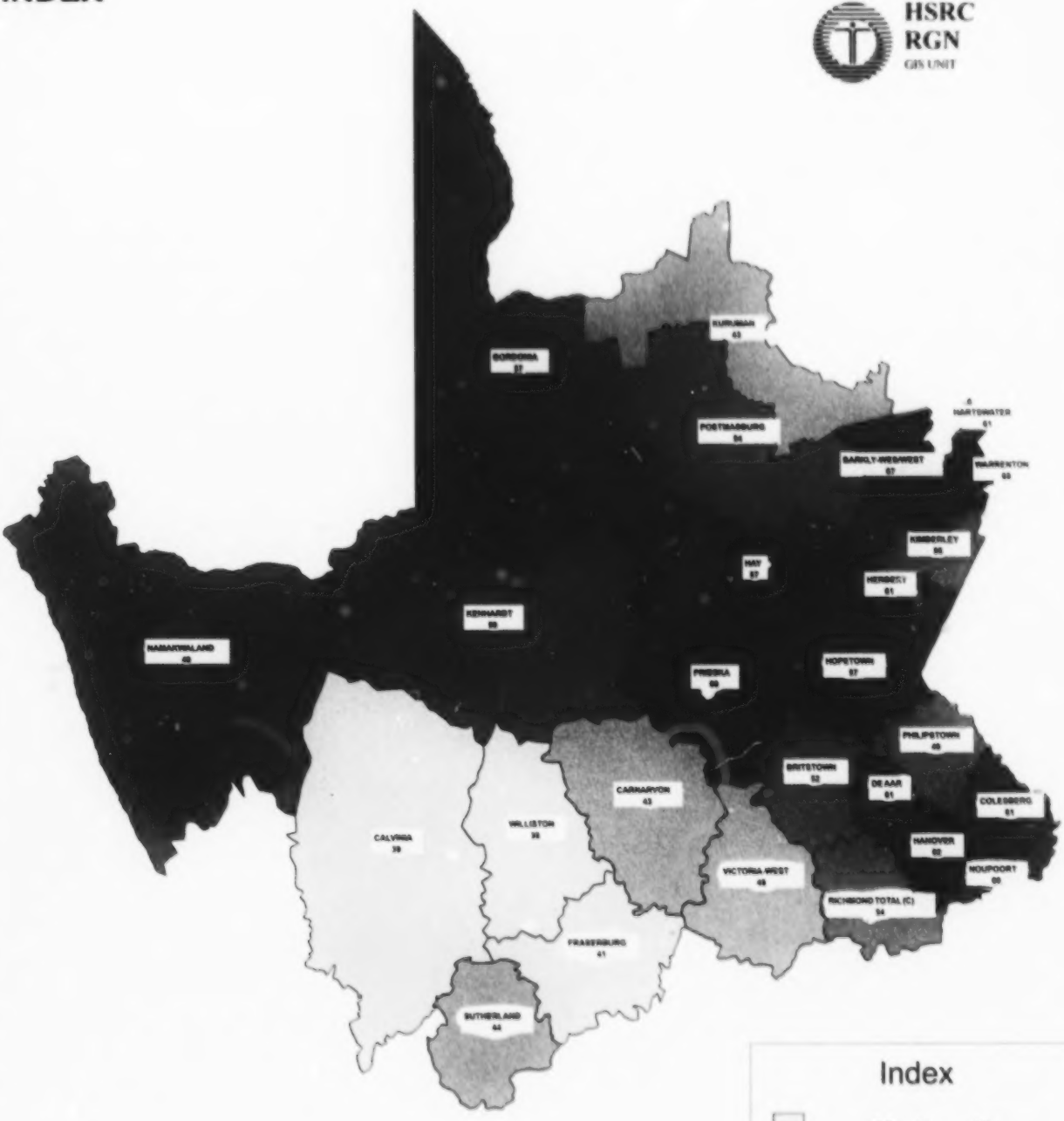

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	55	to	62
	62	to	68

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Table 24 Combined Social Needs and Service Provision Index

DISTRICT	SOCIAL INDEX	SERVICE INDEX	COMBINED INDEX
Warrenton	77	58	68
Barkly West	68	66	67
Hanover	67	57	62
Hartswater	60	61	61
Herbert	59	62	61
De Aar	67	55	61
Colesberg	70	52	61
Noupoort	70	49	60
Prieska	58	62	60
Gordonia	54	60	57
Hay	59	54	57
Hopetown	62	52	57
Kimberley	58	52	55
Postmasburg	50	57	54
Richmond (C)	45	63	54
Britstown	43	60	52
Kenhardt	45	55	50
Namaqualand	42	55	49
Philipstown	54	44	49
Victoria West	54	38	46
Sutherland	39	49	44
Kuruman	39	46	43
Carnarvon	40	46	43
Fraserburg	35	46	41
Calvinia	43	35	39
Williston	32	39	36

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BIBLIOGRAPHY

Atmore, E.1996. *Affordable early childhood development provision for preschool children in South Africa*. Human Sciences Research Council, Pretoria.

Coetzee, J.A. 1993. *Streekontwikkeling, 'n teoretiese perspektief met spesifieke verwysing na die landbousektor in die ekonomiese ontwikkelingstreek*. Ongepubliseerde Ph.D.-tesis, Universiteit van die Vrystaat, Bloemfontein.

Cole Consulting and Setplan. July 1995. *Rapid review of socio-economic conditions in the Northern Cape*. Volume 1. Northern Cape Province.

Davis, M. 1996. South Africa's electrification programme: progress to date and key issues. Volume 13, Number 3. Development Bank, Southern Africa. Halfway House.

Department of Education, Arts and Culture. 1996. Siyoko, B.P (Mrs). Personal Communication.

Department of Education. February 1996. Education White Paper 2. *The organisation, governance and funding of schools*. Government Printer, Pretoria.

Department of Health, Developmental Social Welfare and Environmental Affairs. 1996. Pillay, P. Personal communication.

Department of Health. 1996. *Restructuring the national health system for universal primary health care*. Government Printer, Pretoria.

Department of Housing. 1994. White Paper: A new housing policy and strategy for South Africa. *Government Gazette* No. 16178. Pretoria.

Department of Housing. 1995. *Annual report of the Department of Housing*. Government Printer, Pretoria.

Department of Housing: 1996. *Housing statistics*. (Website).

Department of Posts, Telecommunications and Broadcasting. 1996. Second draft of the White Paper on Telecommunications policy. *Government Gazette* No. 16995. Pretoria.

Department of Transport. May 1996. *A future for roads in South Africa*. Government Printer. Pretoria.

Department of Water Affairs and Forestry. 1994. White Paper. *Water supply and sanitation policy*. Government Printer. Cape Town.

Department of Water Affairs and Forestry. June 1996. White Paper. *National sanitation policy (draft)*. National Sanitation Task Team. Pretoria.

Department of Welfare. 1994. *Discussion group on ageing*. Pretoria.

Department of Welfare. 1996. *South African Council for the Aged database*. Pretoria.

Department of Welfare. September 1996. Draft White Paper for a Population policy. *Government Gazette* No. 17529. Pretoria.

Department of Welfare and Population Development. 1996. White Paper for Social Welfare. *Principles, guidelines, recommendations, proposed policies and programmes for developmental social welfare in South Africa*. Government Printer, Pretoria.

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Eskom. 1995. *The Electrification Project.* (Eskom Website).

Golding, A.P.1992. *The social impact of electricity in a developing community.* Eskom Conference Proceedings: Electricity beyond the grid. Eskom.

Health Systems Trust. 1996. *Health care in the Northern Cape: implications for planning 1996.* Health Systems Trust and the Department of Health. Durban.

Kvalsvig, J.D.1995. *Child development programme.* Human Sciences Research Council, Pretoria.

Maree, J. 1995. *Chairman's overview.* (Eskom Website).

Martin, A.H. (Dr). *Community policing: the London model.* University of Western Ontario. (SAPS Website).

Montgomery & Schuch, 1993. *GIS Data Conversion Handbook.* GIS World Books, Colorado.

Morgan, A. 1995. *Chief executive's report.* (Eskom Website).

Press release. 1996. *Telkom acquires foreign loan to boost its Vision 2000 project.*

Press release. 1996. *Telkom integrates Million Line Project (MLP) into Vision 2000 and SEP process.*

Smith, D. M. 1987. *Geography, inequality and society.* Cambridge University Press. Cambridge.

South African Police Services. 1996. SAPS Magazine *SERVAMUS.* (SAPS Website).

South African Post Office and Telkom S.A. 1995. *Communication: a guide for teachers and pupils.* Corporate Communication. Pretoria.

Whiteford A.C., Posel D. & Kelatwang T. 1995. *Profile of poverty, inequality and human development in South Africa.* Human Sciences Research Council, Pretoria.

This book is one of a series that uses Geographic Information Systems (GIS) to outline the need for and provision of services in each of the nine South African provinces. A global view or indicator of the simultaneous influence of the socio-economic status of people and the level of provision of domestic services and public facilities in all districts is needed. Such a view encapsulates the social and service profile of each district, and can be obtained, firstly, by developing indices for the social and service variables for each district. A single index, or benchmark, of levels of socio-economic status, household services and public facilities in each magisterial district is created by combining these indices.

Graphic and tabular representations of levels of development can highlight spatial inequalities and thereby raise questions of causality. To provide information about local levels of development, knowledgeable persons involved in service delivery in each province were contacted for their comments. The books in this series contain maps, tables and contributions from spokespersons in NGOs, universities, government departments, service providers, parastatals and research organisations.

It is noped that these books and future research on the rate of change in socio-economic status and service provision will contribute to the creation of an equitable South African society.

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